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First Named Inventor	Allan Havemose
Title	SYSTEM AND METHOD FOR APPLICATION ISOLATION
Art Unit	Not yet available
Examiner Name	Not yet available
Attorney Docket Number	AVAIL0109-C5

SIGNATURE of Applicant or Patent Practitioner

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System and Method for Application Isolation

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[0001] Not Applicable

INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC

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BACKGROUND OF THE INVENTION

1. Field of the Invention

[0004] This invention pertains generally to enterprise computer systems, computer networks, embedded computer systems, wireless devices such as cell phones, computer systems, and more particularly to methods, systems and procedures (i.e., programming) for providing application isolation for multiple applications running on a host operating system.

2. Description of Related Art

[0005] In many environments one of the most important features is to ensure that one running application doesn't affect other running applications, and that the crash of one application doesn't compromise other running applications. In many environments applications share system resources, libraries and hardware, which exposes subtle interconnects between seemingly unrelated applications.

[0006] Several approaches have been developed addressing this fundamental problem. The first level of application isolation is provided by the operating system. Modern operating systems such as Linux, UNIX, Windows2000, NT, XP and Vista provide some level of application isolation through the use of processes, and the underlying hardware memory management unit. The use of processes generally ensure that one running application process cannot address memory owned and used by other processes. This first level of isolation does not address the use of shared resources, such as files, file systems, shared memory, and libraries, so other approaches have been developed

[0007] In US 6,496,847 Bugnion et al. teach the use of a virtual machine monitor (VMM) with a protected host operating system (HOS). This invention partially solves the isolation problem by placing every application into its own VMM. The solution requires the use of a VMM subsystem and in some cases a customized operating system. US 6,496,847 does not provide isolation at the level of individual applications, but for entire operating systems with all the applications within it. It does not address the problem of application isolation with multiple natively running applications on one host computer.

[0008] In US 6,601,081 Provino et al. teach the use of a virtual machine for a plurality of application programs. As with 6,496,847 the use of a VM subsystem simply moves the problem to a different layer, and does not address the fundamental issue of application isolation with

several natively running applications on one host computer.

[0009] In US 7,028,305 Schaefer teaches a system for creating an application protection layer to separate an application from the host operating system. Schaefer primarily teaches how to intercept the Windows registry to capture configuration information for Windows application and how to create a virtual operating environment for the application. Access to files is provided via a virtual file system, access to registry information via the virtual registry etc. For Unix and MacOS few specific teachings are presented.

[0010] The present invention provides a system, method, and computer readable medium to create an application isolation environment where applications can run unmodified, on unmodified operating systems without requiring any virtual environments, virtual machines or virtual machine monitors. The present invention also teaches how to manage and handle applications that share libraries and resources, and how to handle complex multi-process applications. In one embodiment an implementation in the Linux environment is described, in another embodiment an implementation on Windows is described.

BRIEF SUMMARY OF THE INVENTION

[0011] A method, system, apparatus and/or computer program are described for achieving application isolation for single and multi-process applications and their associated resources. The application isolation is provided without requiring any changes to the host operating system kernel or requiring any changes to the applications. The application isolation is fully transparent to both operating system and application and automatically adjusts for resources such as memory, storage, and CPUs being allocated and released. The application isolation is provided in an interception layer interposed between the individual applications and the operating system and an interception database. Preferably, any functional changes to system calls

are done exclusively within the interception layer and interception database, and only in the context of the calling application.

[0012] Another aspect of the present invention relates to a method and a computer readable medium comprising instructions for application and application group isolation. The instructions are for installing the applications into the isolated environment, running the application in the isolated environment, un-installing applications from the isolated environment, configuring the isolated environments, and deploying the isolated environments.

[0013] Yet another aspect of the invention relates to a system for providing application isolation to one or more applications, the system comprising: one or more isolated environments including application files and executables; one or more interception layers intercepting access to system resources and interfaces; an interception database maintaining mapping between the system resources inside the one or more isolated environments and outside; and a host operating system, wherein the one or more applications are isolated from other applications and the host operating system while running within the one or more isolated environments.

[0014] Definitions:

[0015] The terms “*Windows*” and “*Microsoft Windows*” are utilized herein interchangeably to designate any and all versions of the Microsoft Windows operating systems. By example, and not limitation, this includes Windows XP, Windows Server 2003, Windows NT, Windows Vista, Windows Server 2008, Windows Mobile, and Windows Embedded.

[0016] The terms “*Linux*” and “*UNIX*” are utilized herein to designate any and all variants of Linux and UNIX. By example, and not limitation, this includes RedHat Linux, Suse Linux, Ubuntu Linux, HPUX (HP Unix), and Solaris (Sun Unix).

[0017] The term “*node*” and “*host*” are utilized herein to designate one or more processors running a single instance of an operating system. A virtual machine, such as

VMWare or XEN VM instance, is also considered a “*node*”. Using VM technology, it is possible to have multiple nodes on one physical server.

[0018] The terms “*application*” is utilized to designate a grouping of one or more processes, where each process can consist of one or more threads. Operating systems generally launch an application by creating the application’s initial process and letting that initial process run/execute. In the following teachings we often identify the application at launch time with that initial process.

[0019] The term “*application group*” is utilized to designate a grouping of one or more applications.

[0020] In the following we use commonly known terms including but not limited to “*process*”, “*process ID (PID)*”, “*thread*”, “*thread ID (TID)*”, “*thread local storage (TLS)*”, “*instruction pointer*”, “*stack*”, “*kernel*”, “*kernel module*”, “*loadable kernel module*”, “*heap*”, “*stack*”, “*files*”, “*disk*”, “*CPU*”, “*CPU registers*”, “*storage*”, “*memory*”, “*memory segments*”, “*address space*”, “*semaphore*”, “*loader*”, “*system loader*”, “*system path*”, and “*signal*”.

These terms are well known in the art and thus will not be described in detail herein.

[0021] The term “*transport*” is utilized to designate the connection, mechanism and/or protocols used for communicating across the distributed application. Examples of transport include TCP/IP, Message Passing Interface (MPI), Myrinet, Fibre Channel, ATM, shared memory, DMA, RDMA, system buses, and custom backplanes. In the following, the term “*transport driver*” is utilized to designate the implementation of the transport. By way of example, the transport driver for TCP/IP would be the local TCP/IP stack running on the host.

[0022] The term “*interception*” is used to designate the mechanism by which an application re-directs a system call or library call to a new implementation. On Linux and other UNIX variants interception is generally achieved by a combination of LD_PRELOAD, wrapper

functions, identically named functions resolved earlier in the load process, and changes to the kernel `sys_call_table`. On Windows, interception can be achieved by modifying a process' Import Address Table and creating Trampoline functions, as documented by "Detours: Binary Interception of Win32 Functions" by Galen Hunt and Doug Brubacher, Microsoft Research July 1999". Throughout the rest of this document we use the term to designate the functionality across all operating systems.

[0023] The term "*file context*" or "*context*" is used in relation with file operations to designate all relevant file information. By way of example, and not limitation, this includes file name, directory, read/write/append/execute attributes, buffers and other relevant data as required by the operating system.

[0024] The term "*transparent*" is used herein to designate that no modification to the application is required. In other words, the present invention works directly on the application binary without needing any application customization, source code modifications, recompilation, re-linking, special installation, custom agents, or other extensions.

[0025] The terms "*private and isolated environment*" and "*isolated environment*" are used herein interchangeably to designate the private area set aside for application isolation, as described in further detail below.

[0026] The present invention provides application isolation at several levels: 1) during installation, all installation and registration information is intercepted and installation is re-directed to a private and isolated environment, 2) during launch of an application the installation information is retrieved and provided to the application again via interception, and 3) during access to external resources interception of all access is re-directed as necessary. The combination of all levels of isolation provides for fully transparent application isolation. Thus at all times, access to resources, configuration and run-time information is intercepted and

redirected.

[0027] By way of example, and not limitation, for embodiments within Windows operating systems, access to the Windows Registry is intercepted and included in the application isolation.

[0028] Further aspects of the invention will be brought out in the following portions of the specification, wherein the detailed description is for the purpose of fully disclosing preferred embodiments of the invention without placing limitations thereon.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

[0029] The invention will be more fully understood by reference to the following drawings which are for illustrative purposes only:

[0030] FIG. 1 is a block diagram of the core system architecture showing two applications, the interception layer, and the interception database.

[0031] FIG. 2 is a block diagram illustrating installation and running of applications

[0032] FIG. 3 is a block diagram illustrating un-installation

[0033] FIG. 4 is a block diagram illustrating the Interception Database

[0034] FIG. 5 is a block diagram illustrating running application groups

[0035] FIG. 6 is a block diagram illustrating running multiple application groups concurrently

[0036] FIG 7. is a block diagram illustrating installation-free deployment

[0037] FIG 8. is a block diagram illustrating administration

[0038] FIG 9 is a block diagram illustrating various deployment scenarios

[0039] FIG 10 is a block diagram illustrating interception data and control flow

DETAILED DESCRIPTION OF THE INVENTION

[0040] Referring more specifically to the drawings, for illustrative purposes the present invention will be described in relation to FIG. 1 through FIG. 10. It will be appreciated that the system and apparatus of the invention may vary as to configuration and as to details of the constituent components, and that the method may vary as to the specific steps and sequence, without departing from the basic concepts as disclosed herein.

[0041] 1. Introduction

[0042] The context in which this invention is described is one or more applications being installed, running and accessing local and remote resources. Without affecting the general case of multiple applications, the following scenarios often depict and describe one or two applications as applicable. Multiple applications are handled in a similar manner.

[0043] 2. Overview

[0044] FIG 1 illustrates by way of example embodiment 10 the overall structure of the present invention. The following brief overview illustrates the high-level relationship between the various components; further details on the inner workings and interdependencies are provided in the following sections. Fig 1. Illustrates by way of example embodiment 10 two applications A 22 and B 26 loaded in memory 14 on a node 12. The interception layers 16, 17, are interposed between the applications 22, 26 and the system libraries 18 and operating system 20. The interception database 28 provides system-wide persistent interception information and configuration information for the isolated environments. The interception layers 16,17 combined with the Interception database 28 provides application isolation 24. System resources, such as CPUs 36, I/O devices 34, Network interfaces 32 and storage 30 are accessed using the operating system. Devices accessing remote resources use some form of transport network 38. By way of

example, system networking 32 may use TCP/IP over Ethernet transport, Storage 32 may use Fibre Channel or Ethernet transport, and I/O may use USB. The present invention access and arbitrate resources through the operating system and does not work at the transport level.

[0045] 3. Installing and Running applications

[0046] FIG. 2 illustrates by way of example embodiment 40 installation of a typical application “AppXYZ” 42. The Interception Layer (IL) 50 intercepts all calls to system libraries and the operating system. IL 50 communicates with the Interception Database (IDB) 58 to create a private and isolated environment where the application can execute without depending on or affecting other parts of the environment. By way of example, and not limitation, first the installation process requests a resource 44, such as opening a file. The resource request is intercepted by IL 50 and a request to create 54 a private instance of the resource is made to the Interception Database (IDB) 58. The IDB 58 is a system wide database containing mappings 60, 62, 64 between the resources as the application 42 requests them 60, and their private values inside the isolated environment 62, subject to global exceptions 64. Further details on the IDB are given in section 4 below. By way of example, and not limitation, if the resource request 44 was to create a file in C:\Program Files\AppDir, the IDB may map that to a private location 62, such as D:\private\AppXYZ\C\Program Files\AppDir. So while AppXYZ 42 operates under the assumption that it’s working on C:\Program Files\AppDir, in reality all access has been intercepted and re-directed to a private and isolated environment in D:\private\AppXYZ\C\Program Files\AppDir. The IDB 58 returns 54 the private resource to IL 50, which returns the resource handle 46 to the application 42. As the application 42 uses the resource 46 it operates under the assumption that the original resource request was satisfied, and is unaware that all resources have been relocated to a private and isolated environment. When use of the resource is terminated 48, the IL 50 sends a message to the IDB 58 that the resource

currently is inactive 56. All mappings are maintained in the IDB 58 after the installation finishes as they may be needed after the initial request.

[0047] Fig 2 also illustrates, by way of example embodiment 40, how an application 42 runs after being installed. As resources are opened, used, and freed, the same steps as described above are used. As the application 42 executes, it generally access or create resources not used during installation. By way of example, if AppXYZ 42 is a word processor, the user may create a document and save it to storage. That document did not exist as part of the installation process, but is handled using the same mechanisms previously taught. As the user choose to create a new document, AppXYZ 42 makes a request 44 to have the file created. This is intercepted by the IL 50 and forwarded 52 to the IDB 58. The IDB creates a mapping between the Applications 42s public document name 60, and the private and isolated document name 62. As with Application 42 information stored in the IDB 58, so is the application data information stored persistently until un-installation.

[0048] At times it may be desirable to store some user-data outside the isolated environment, such as on a central file server. In a preferred embodiment, this is supported by specifying which resource locations should remain fixed and public in the global exceptions 64. Such public resources are not translated into the isolated environment.

[0049] 4. Uninstalling Applications

[0050] FIG. 3 illustrates by way of example embodiment 80, un-installation of a typical application AppXYZ 82. The un-installation uses and requests resources 84, which are intercepted by the IL 86 and redirected 88 by the IDB 90, as described above. All actions, such as deletion of files, are re-directed to the private and isolated location. When the un-install terminates, sometimes called exit(), the exit is intercepted 92 by the IL 86, and forwarded 94 to the IDB 90. The IDB 90 removes all entries mapping 100 application AppXYZ 82 resources 96

against its isolated environment 98. The application is now uninstalled, and all isolation information has been removed.

[0051] 5. Interception Database and Resource Mapping

[0052] The Interception Database (IDB) is a system wide database containing mappings between the resources as the application requests them, and their private values inside the isolated environment. Fig. 4 illustrates, by way of example embodiment 120, the Interception Database (IDB) 122, and its various components. The IDB 122 contains two main components, a rules engine 130 and the core resource mappings 132. The rules engine 130 contains the main high-level configuration information 124 as provided by an administrator 126. The rules engine 130 and its configuration information 124 includes, but is not limited to, information designating the base directory for installing the isolated environment, specific exceptions 138 to the resource mappings and the general mechanism used to create the mappings. The administrator 126 defines exceptions 138 as needed. The global exceptions contain all resources that should not be remapped to the isolated environments. Examples include, but are not limited to, shared storage, shared devices, network resources, and system-wide resources.

[0053] The resource mapping 132 maintains mapping between public resources 134 and the corresponding private and isolated resources 136. The resource mapping 132 also consults the global exceptions 138 prior to translating any public to private or private to public resource requests.

[0054] Resources take many forms including but not limited to files, fonts, shared libraries, shared devices, and storage. On Microsoft Windows the Registry is an important component and contains system wide configuration information used by most applications. Some resources, such as data files, tend to be local to the individual applications, while e.g. fonts tend to be shared between multiple applications.

[0055] Access to files are handled by the IL (Fig. 2 - 50) intercepting all file operations between the application and the system libraries and operating systems. Examples include, but are not limited to open(), fopen(), write(), read(), close(), seek(),remove() and the Windows equivalents. Generally these functions either contain a public file name as part of the arguments, or a file handle to an already established file. The files names are remapped as described above, to an isolated environment, and any further reference to the handle is automatically re-directed to the isolated environment. File operations that return information, are translate back to the public values. By way of example, and not limitation, if the applications ask for “current directory”, the public name, as the application expects is returned, and not the private name within the isolated environment. By way of further example, if the current directory is located on shared storage included the global exceptions 138, the directory is returned un-translated, as it’s subject to the exception handling.

[0056] File, paths and other resource names can be specified both as absolute values or relative values. By way of example, and not limitation, an absolute path for a document file may be “C:\MyDocuments\myfile.doc”, while a relative reference may be “..docs\myfile.doc”. Absolute references are resolved as previously described by consulting the public resources 134, private resources 136 and global exceptions 138. Relative addresses are resolved in a multi-step process: First relative names are converted to absolute names and then the absolute name is converted as previously described. This mechanism ensures fully transparent support of both absolute and relative naming of all resources.

[0057] Fonts pose particular problems, as fonts reside both in application-specific directories and global system directories, such as “C:\Windows\Fonts” on Windows and “/usr/X11R6/lib/X11/fonts/” and “/usr/share/fonts/” on Linux. An application may install font both into one or more global font directories as well as application-specific directories. All

shared-fonts directories are included in the Global Exceptions 138 as they should be accessed directly. If during installation additional fonts are installed, they are installed according to the policy chosen by the administrator 126. Prior to installation, the administrator chooses if application–installed fonts are allowed to be placed in the global fonts directory or if they should be placed in the isolated environment. The rules engine 130 consults this administrative choice and upon receiving a request to enumerate the font directory will include isolated-environment fonts if so configured. If the application installs its fonts into its own file structure, the fonts are treated as normal files and are not subject to the automatic enumeration as the application knows where to look for its application-specific fonts.

[0058] Modern operating systems share components across multiple applications. Such shared libraries also pose a special case. On Windows Dynamic Link Libraries (DLLs) and on Linux/UNIX shared objects (.so files) are examples of such shared components. On Windows shared libraries primarily reside in C:\Windows and C:\Windows\System32, but can sit anywhere. On Linux/Unix the primary locations are '/usr/lib', '/usr/X11/lib' and the entire /usr/lib/ directory structure. The loader of the operating system traverses the system PATH to find any requested shared library, but this can be manually or programmatically changed as part of the load process. The PATH is set using environment variables both on Windows and Linux. In order to intercept loading of shared libraries the present invention loads the application in stead of using the system loader directly. This enables interception of library loading done by the loader. If during installation additional shared libraries are installed, they are installed according to the policy chosen by the administrator 126. Prior to installation, the administrator chooses if application–installed libraries are allowed to be placed in a global directory or if they should be placed in the private and isolated environment. If the libraries are placed into the private and isolated environment, the load PATH is adjusted to search the private location.

[0059] As with files, libraries can be loaded with both absolute and relative addresses. The load process handles the resource mapping as described above. In all cases, the loading must follow the same path and address resolution as the system loader provides.

[0060] If the application installs its shared libraries into its own file structure, the libraries are treated as normal files and are not subject to an adjusted PATH or load-order as the application knows where to look for its application-specific libraries. In the preferred embodiment, if the application installs new shared libraries, they are installed into the isolated environment

[0061] One of the most significant sources of application incompatibilities, and one of the motivators for the present invention, is shared library conflict. By way of example, and not limitation, if a shared library is loaded on the system, and a new application installs an older version of the library, the older version may overwrite the newer version and render other applications non-functional based on having their shared library replaced by an incompatible older version. This is a common problem on both the Windows and Linux platforms. Using the preferred embodiment described above, the application would install the older library into its isolated environment and therefore not affect other applications. The application would load and use the older library without ever being aware that it was provided from the isolated environment, and other applications running on the system would be unaffected by the installation of the older library.

[0062] Microsoft Windows uses a special configuration system generally referred to as “the Registry”. The registry contains configuration, installation and un-installation information for applications on the system. When an application installs on a Windows system, it uses the registry to store values such as “home directory”, “recent files”, etc. The preferred embodiment on Windows systems additionally include interception of all registry information, and ensures

that installation and runtime information that would normally go into the registry, in stead is stored and maintained in the IDB. During installation of a Windows application all registry information is thus stored in the IDB and not the registry. When an application requests registry information, the information is provided from the IDB, and not the registry. This ensures complete application isolation from the registry.

[0063] The isolated environment contains all application files and shared resources and their respective mappings. These are all preserved persistently on local or remote storage and can be archived, copied and restored as any other set of files. Specifically, the isolated environment directory structure can be copied to a different node, and used directly to start the application on that node.

[0064] So far the Interception database has been described as a “database”. Based on the teachings above, it’s readily apparent to anyone skilled in the art, that the only requirement is that updates to the resource tables 134, 136 and 138 be atomic at the record level. This functionality can be readily implemented in a variety of ways, including using Java’s ConcurrentHashMap(), the Windows .NET equivalents, or by custom programming the data structures and locking. Furthermore, preferably concurrent access to the Interception Database translations is provided. In an alternate implementation such a custom interception database is used in stead of a full database.

[0065] 6. Interception data and control flow

[0066] Fig 10 illustrates by way of example embodiment 240 the data and control flow in more detail. By way of example, and not limitation, consider first an environment with the present invention inactive. An application 242 calls a write() 243 operation. The write operation is resolved by the operating system loader and directed 244 to the system libraries 248 and operating system 250, and ultimately writes data to storage 251. Return value is returned 246 to

the caller 243 within the calling application 242.

[0067] By way of example, and not limitation, consider an environment with the present invention active. An application 252 calls a write() 253 operation. As described in above, the write() is intercepted 254 by the interception layer 262. Parameters to the write() call are translated by the Interception Database 264 and the rules for the isolated environment 266 and the file context and parameters of the calling write are adjusted to point to the isolated environment. The write call 268 is then forwarded to the system libraries 258 and operating system 260 as were the case with the present invention inactive. The return value 266 from the write is returned to the IL 262 which, using the IDB 264, maps the result back into the original context and returns the value 256 to the caller 253. The application 252 issuing the write 253 operating is thus unaware that the write is being intercepted and re-directed to the isolated environment. All translation and isolation is performed outside the application 252, and before the write operation ever reaches the system libraries 258 or operating system 260.

[0068] A specific example, using ANSI C, further illustrates the mechanics of the IL 262 and IDB 264 translations. Consider an example where a file is opened for writing, a small text is written, and the file is closed using the following code

```
int main(void) {    char const *pStr =
“small text”;    FILE *fp = fopen(“/home/user/newfile.txt”, “w”)    if (fp != null)
fwrite(pStr,strlen(pStr),1,fp);    fclose(fp) }
```

[0069] The call to fopen() returns a file pointer, which the fwrite() operation uses to write data to the file. The call to fopen() includes the file name “/home/user/newfile.txt” as the first parameter. The Interception Layer 262 intercepts the call to fopen() and changes the actual filename to the corresponding location in the isolated environment before passing 268 the call on to the system library implementation 258. The following fwrite() operation is unaware that the file pointer points to the isolated environment and simply writes the data. Finally, fclose() is

called to close the file. The file pointer still points to the isolated environment and the close proceeds as a close would without the present invention active.

[0070] 7. Application Groups

[0071] At times multiple applications share data, libraries and work in combination. By way of example, and not limitation, Microsoft Word may include a Microsoft Excel spreadsheet. In general any number of applications may need to collaborate and share data. So far the approach has been to isolate applications so that, to continue the example, if Word and Excel were installed separately, they would both be isolated and not able to work together. To enable sharing between pre-designated applications, the applications need to be grouped together in an application group and installed inside the same isolated environment. FIG. 5 illustrates by way of example embodiment 140, an application group 142 operating within the present invention. The administrator 152 pre-defines the application group 142 and the individual applications within the group: App-1 143, App-2 144 and App-n 146. The administrator 152 commits the application group to the IDB 150. The IDB uses the same mechanisms as described above for individual applications, and structures the isolated environment 154 so that the individual applications share resources and file system. By installing the applications together they automatically use the same isolated environment and sharing is fully automatic without requiring any additional information. The interception layer 148 intercepts, as previously described, and requires no special configuration; all application group information is contained within the IDB 150 and the settings for the isolated environment 154.

[0072] 8. Concurrent operation of multiple application groups

[0073] FIG. 6 illustrates by way of example embodiment 160, concurrent operation of three application groups: application group A 162, application group B 166 and application group C 170. Each application group consists of one or more applications. As previously

described each application group has a dedicated interception layer: IL 164 for application group A 162, IL 168 for application group B 166, and IL 172 for application group C 170. Each interception layer 164, 168, 172 provide the interception services as previously described, with each attached to only one application group. As previously disclosed, the Interception Database 174 is global, and is shared between all application groups and interception layers.

[0074] The administrator 176 commits all administrative settings to the IDB 174, which is reflected in the database tables for the isolated environment 178.

[0075] 9. Running multiple concurrent instances of one application

[0076] At times it may be desirable to run multiple instances of the same application or application group, but in separate isolated environments. Referring again to Fig. 6 for illustrative purposes. The administrator 176 defines each instance of the application group using separate application group names. Even though Application Group A 162, Application Group B 166, and Application Group C 170 are identical, they have been pre-defined with their own environment, and thus run in separate isolated environments without any further intervention or configuration.

[0077] 10. Installation-free deployment

[0078] One of the major problems with application deployment is the actual installation and the associated risks as described previously. Using the present invention, a pre-created isolated environment can be used in place of performing an actual installation. The isolated environment contains all application files, shared libraries, and installation data and can be moved, copied and run from anywhere the present invention is present.

[0079] Fig. 7 illustrates by way of example embodiment 180, how to deploy an isolated environment without needing more than one initial installation 181. First the administrator 196 installs 184 the application group 182. As previously taught the interception database 186 creates an isolated environment 188 which contains all application group data, including shared files,

data and programs. As taught above, the isolated environment is written to storage and can be copied and run elsewhere. With the isolated environment ensuring isolation from the underlying operating system and applications, an isolated environment can be deployed on a different node by copying the entire isolated environment directory structure to the new node and starting the application. Referring to Fig 7, the administrator 196 copies the isolated environment 188 into the first node 190, the second node 192 and the third node 194.

[0080] In an alternate embodiment, the environment 188 is stored on shared storage, and is accessed directly from the shared storage. In this embodiment, the isolated environment is loaded directly from shared storage, and only local data, such as temporary files, are kept locally.

[0081] In another embodiment, the environment 188 is saved to storage and shipped to a remote site. The remote site loads the environment and runs the applications directly from within the environment without any installations. In this embodiment the present invention may be used for disaster recovery.

[0082] 11. Administration

[0083] Fig. 8 illustrates by way of example embodiment 200, the management infrastructure. The administrator 202 communicates configuration preferences to the Interception database 204 for each isolated environment 206. The IDB 204 contains, as described above, two separate modules: 1) a rules engine (Fig 4 – 130) and 2) management of the resource mappings (Fig. 4 – 132). The rules engine implements the administrator provided resource translations and populates the tables (Fig 4 – 134,136,138).

[0084] The administrator 202 provides general configuration information applicable to all isolated environments and applications 203, unless explicitly changed for a particular isolated environment 205. Examples of administrator-provided global configuration information 203 includes, but is not limited to

[0085] * Default storage location for all isolated environments

[0086] * Default resource exceptions

[0087] * Default application and application group naming

[0088] * Default policy for installing fonts and shared resources into global or isolated environment

[0089] Each setting can be changed, i.e. replaced, on an application by application basis, and on an application-group by application basis. As determined by the administrator, examples of administrator-provided application-level configuration information 205 include, but is not limited to

[0090] * Storage location for isolated environment

[0091] * Logical name of application or application group

[0092] * Application or application-group specific resource exceptions

[0093] * Policy for installing fonts and shared resources into global or isolated environment

[0094] The combination of the global configuration information 203 with the rules engine (Fig 4 – 130), makes the configuration and deployment on new isolated environment fully automatic after the initial global configuration has been provided. As described, it may be desirable to change one or more of an application's isolated environment settings. By way of example, and not limitation, if a particular application needs to locally access certain resources only available on a particular server, that one application's isolated environment would be located on that particular server, while all other environments were centrally stored. The ability to “mix and match” environments and deployments ensure full flexibility and ability to deploy multiple applications in a heterogeneous environment with all the benefits of the present invention.

[0095] In another embodiment the administrative functions 202 is done programmatically using an Application Programming Interface (API).

[0096] 12. Deployment Scenarios

[0097] FIG 9 illustrates by way of example embodiment 220 a variety of ways the invention can be configured to operate. In one embodiment, the invention is configured to run from a central file server 222, in another it is configured to run on a pair of application servers 224, 226. In a third embodiment the invention is configured to run on a LAN 228 connected PC 232 together with the application servers 224, 226, and with environments loaded from the central file server 222. In a fourth embodiment the invention is configured to isolate applications on a cell phone 230, which is wirelessly connected 238 to the Internet 236, the application servers 224,226 and the file server 222. A fifth embodiment has an isolated environment on a home-PC 234 connected via the internet 236 to the application servers 224,226 and the LAN PC 232. The invention runs on one or more of the devices, can be distributed across two or more of these elements, and allows for running the invention on any number of the devices (222,224,226,230,232,234) at the same time

[0098] 13. Conclusion.

[0099] In the embodiments described herein, an example programming environment was described for which an embodiment of programming according to the invention was taught. It should be appreciated that the present invention can be implemented by one of ordinary skill in the art using different program organizations and structures, different data structures, and of course any desired naming conventions without departing from the teachings herein. In addition, the invention can be ported, or otherwise configured for, use across a wide-range of operating system environments.

[00100] Although the description above contains many details, these should not be

construed as limiting the scope of the invention but as merely providing illustrations of some of the exemplary embodiments of this invention. Therefore, it will be appreciated that the scope of the present invention fully encompasses other embodiments which may become obvious to those skilled in the art, and that the scope of the present invention is accordingly to be limited by nothing other than the appended claims, in which reference to an element in the singular is not intended to mean “one and only one” unless explicitly so stated, but rather “one or more.” All structural and functional equivalents to the elements of the above-described preferred embodiment that are known to those of ordinary skill in the art are expressly incorporated herein by reference and are intended to be encompassed by the present claims. Moreover, it is not necessary for a device or method to address each and every problem sought to be solved by the present invention, for it to be encompassed by the present claims. Furthermore, no element, component, or method step in the present disclosure is intended to be dedicated to the public regardless of whether the element, component, or method step is explicitly recited in the claims. No claim element herein is to be construed under the provisions of 35 U.S.C. 112, sixth paragraph, unless the element is expressly recited using the phrase “means for.”

CLAIMS

What is claimed is:

1. A system, comprising:
one or more central processing units;
one or more isolated environments including one or more applications; and
an interception database configured to maintain mapping between host operating system resources inside the one or more isolated environments and outside the one or more isolated environments;
wherein the one or more central processing units and the one or more isolated environments are configured to interact with each other;
wherein the one or more isolated environments are created during installation of the one or more applications; and
wherein uninstalling an application of the one or more applications comprises one or more of removing one or more mappings in said interception database for said application, uninstalling said application, archiving one or more isolated environments, and removing isolated environment information from storage.
2. The system according to claim 1, wherein the one or more applications are isolated from other applications and a host operating system while the one or more applications run within the one or more isolated environments.
3. The system according to claim 1 comprising one or more interception layers configured to intercept access to host operating system resources and host operating system interfaces.
4. The system according to claim 3, wherein the one or more interception layers intercept calls by the one or more applications to the host operating system and system libraries.
5. The system according to claim 1, wherein updates to the one or more isolated environments occur as the one or more applications use additional resources.

6. The system according to claim 1, wherein the interception database translates parameters and contexts between a host environment and the one or more isolated environments.

7. The system according to claim 1, wherein the one or more isolated environments are stored on a local storage.

8. The system according to claim 1, wherein the one or more isolated environments are stored on a networked storage and the one or more applications are delivered over a network.

9. The system according to claim 1, wherein each of the one or more applications is installed into its own isolated environment.

10. The system according to claim 1, wherein two or more applications are installed into a shared isolated environment.

11. The system according to claim 10, wherein the two or more applications share resources inside the shared isolated environment.

12. The system according to claim 1, wherein two or more applications are installed into separate isolated environments and the one or more applications run concurrently in the separate isolated environments.

13. The system according to claim 1, wherein a first application of the one or more applications is installed twice into separate isolated environments, and the separate isolated environments run concurrently and independently.

14. A method, comprising:
creating one or more isolated environments during installation of one or more applications;
maintaining a mapping between system resources inside the one or more isolated environments and outside the one or more isolated environments; and
uninstalling an application of the one or more applications, wherein said uninstalling

comprises one or more of removing at least one of said mappings, uninstalling said application, and removing isolated environment information from storage.

15. The method of claim 14 comprising intercepting access to system resources and interfaces at one or more interception layers.

16. The method of claim of claim 14 comprising updating the one or more isolated environments as the one or more applications use additional resources.

17. The method of claim 14 comprising isolating the one or more applications from other applications and a host operating system while running within the one or more isolated environments.

18. A non-transitory computer readable storage medium comprising instructions for: creating one or more isolated environments during installation of one or more applications;

maintaining a mapping between system resources inside the one or more isolated environments and outside the one or more isolated environments; and

uninstalling an application of the one or more applications, wherein said uninstalling comprises one or more of removing at least one of said mappings, uninstalling said application, and removing isolated environment information from storage.

19. The non-transitory computer readable storage medium of claim 18 comprising instructions for updating the one or more isolated environments as the one or more applications use additional resources.

20. The non-transitory computer readable storage medium of claim 18 comprising instructions for isolating the one or more applications from other applications and a host operating system while running within the one or more isolated environments.

ABSTRACT

A system, method, and computer readable medium for providing application isolation to one or more applications and their associated resources. The system may include one or more isolated environments including application files and executables, and one or more interception layers intercepting access to system resources and interfaces. Further, the system may include an interception database maintaining mapping between the system resources inside the one or more isolated environments and outside, and a host operating system. The one or more applications may be isolated from other applications and the host operating system while running within the one or more isolated environments.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		SYSTEM AND METHOD FOR APPLICATION ISOLATION		
First Named Inventor/Applicant Name:		Allan Havemose		
Filer:		Raffi Gostanian/Jaclyn Makarewicz		
Attorney Docket Number:		AVAIL0109-C5		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	300	300
UTILITY SEARCH FEE	1111	1	660	660
UTILITY EXAMINATION FEE	1311	1	760	760
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1720

Electronic Acknowledgement Receipt

EFS ID:	35180112
Application Number:	16278659
International Application Number:	
Confirmation Number:	8296
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION
First Named Inventor/Applicant Name:	Allan Havemose
Customer Number:	84646
Filer:	Raffi Gostanian/Jaclyn Makarewicz
Filer Authorized By:	Raffi Gostanian
Attorney Docket Number:	AVAIL0109-C5
Receipt Date:	18-FEB-2019
Filing Date:	
Time Stamp:	20:14:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

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Payment Type	CARD
Payment was successfully received in RAM	\$ 1720
RAM confirmation Number	021919INTEFSW20145000
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	AVAIL0109-C5_ads.pdf	1789203	no	7
			fc d1ee2ee6fd45f27039fa109fe095593d0f19a2		
Warnings:					
Information:					
2	Oath or Declaration filed	AVAIL0109-C5_Declaration_Signed.pdf	283972	no	1
			7ebb8030466364fafc61c792e8c2cbe9536dcfab		
Warnings:					
Information:					
3	Drawings-only black and white line drawings	AVAIL0109-C5_Drawings.pdf	98095	no	10
			eeae84766422242adf5ed67c65ee92e9bcc4027b		
Warnings:					
Information:					
4	Nonpublication request from applicant	AVAIL0109-C5_NonPub_Request.pdf	230551	no	1
			d23bdd8497b9b8f9554e5c762936b05bcc668fdd		
Warnings:					
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5	Power of Attorney	AVAIL0109-C5_poa_pg1.pdf	111985	no	1
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6	Power of Attorney	AVAIL0109-C5_poa_pg2.pdf	108822	no	1
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7		Avail0109-C5_Specification.pdf	121190 4a4530ea3ac0dc34f55b222906e08843eea5f892	yes	26		
Multipart Description/PDF files in .zip description							
		Document Description	Start	End			
		Specification	1	22			
		Claims	23	25			
		Abstract	26	26			
Warnings:							
Information:							
8	Fee Worksheet (SB06)	fee-info.pdf	35027 c0e5000548e3a59136247ec859cd838cfbd64c6b	no	2		
Warnings:							
Information:							
Total Files Size (in bytes):			2778845				
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C5
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

Secrecy Order 37 CFR 5.2

<input type="checkbox"/>	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
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Inventor Information:

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	Allan		Havemose	
Residence Information (Select One) • US Residency Non US Residency Active US Military Service				
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All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.				Add

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<input type="checkbox"/>	An Address is being provided for the correspondence Information of this application.
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Email Address	Add Email Remove Email

Application Information:

Title of the Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		
Attorney Docket Number	AVAIL0109-C5	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	10	Suggested Figure for Publication (if any)	

Filing By Reference :

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C5
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☒ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	B4646		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the application number blank.

Prior Application Status	Pending	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
	Continuation of	15641300	2017-07-04		
Prior Application Status	Patented	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15641300	Continuation of	15149518	2016-05-09	9697038	2017-07-04
Prior Application Status	Patented	Remove			

Application Data Sheet 37 CFR 1.76		Attorney Docket Number		AVAIL0109-C5	
		Application Number			
Title of Invention		SYSTEM AND METHOD FOR APPLICATION ISOLATION			

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15149518	Continuation of <input type="button" value="v"/>	14606175	2015-01-27	9336045	2016-05-10
Prior Application Status		Patented <input type="button" value="v"/>	<input type="button" value="Remove"/>		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14606175	Continuation of <input type="button" value="v"/>	13708477	2012-12-07	8943500	2015-01-27
Prior Application Status		Patented <input type="button" value="v"/>	<input type="button" value="Remove"/>		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13708477	Continuation of <input type="button" value="v"/>	12421691	2009-04-10	8341631	2012-12-25

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Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)
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Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C5
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		

Authorization to Permit Access:

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If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1	Remove
<p>If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.</p> <p style="text-align: right;">Clear</p>	
<ul style="list-style-type: none"> Assignee 	<p>Legal Representative under 35 U.S.C. 117</p> <p>Joint Inventor</p>
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest
<p>If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
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<p>If the Applicant is an Organization check here. <input checked="" type="checkbox"/></p>	
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C5
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		

Mailing Address Information For Applicant:			
Address 1	RESEARCH TRIANGLE PARK CENTER		
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AVAIL0109-C5
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR APPLICATION ISOLATION		

Signature:

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NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.					
Signature	/Raffi Gostanian/			Date (YYYY-MM-DD)	2019-02-18
First Name	Raffi	Last Name	Gostanian	Registration Number	42595
Additional Signature may be generated within this form by selecting the Add button.					Add

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/AIA/01 (06-12)

Approved for use through 01/31/2014. OMB 0651-0032

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of
Invention

System and Method for Application Isolation

As the below named inventor, I hereby declare that:

This declaration is directed to: ☐ The attached application, or

☒ United States application or PCT international application number 13/708,477
filed on December 7, 2012

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Allan Havemose

Date (Optional): 12/7/2012

Signature: Allan Havemose

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/US/AIA/1 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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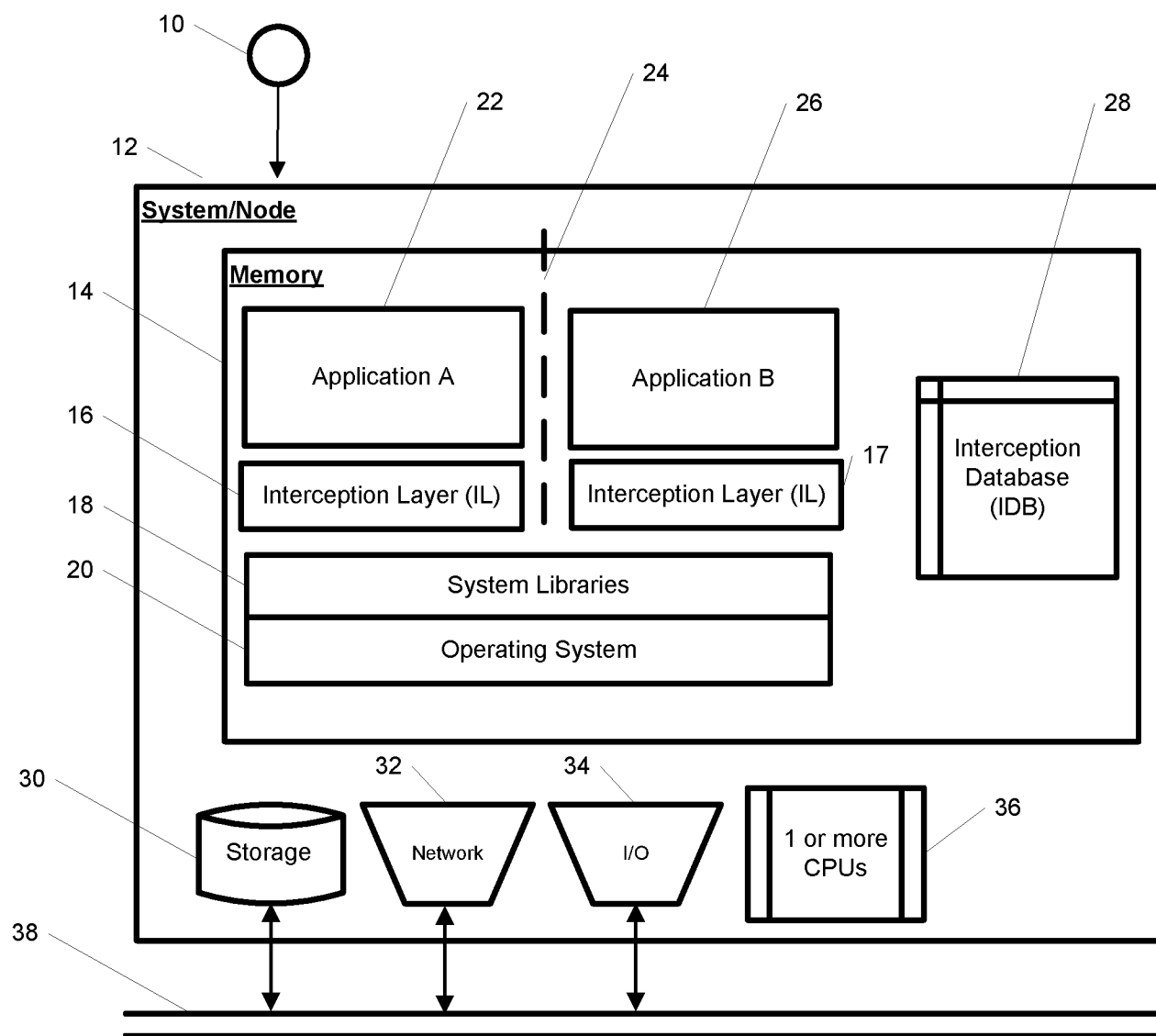


FIG.1 – System Overview

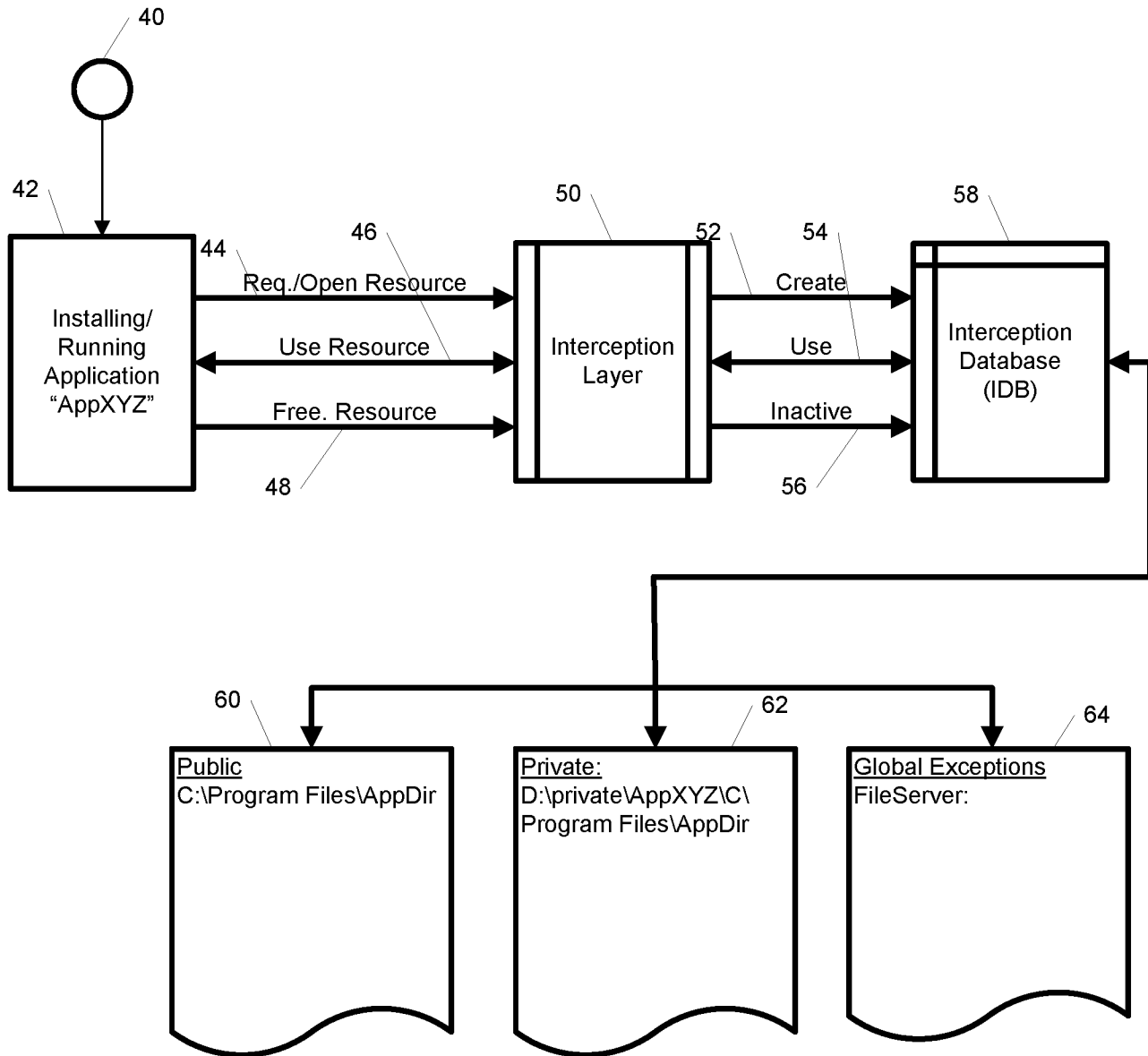


FIG.2 – Installing and running an Application

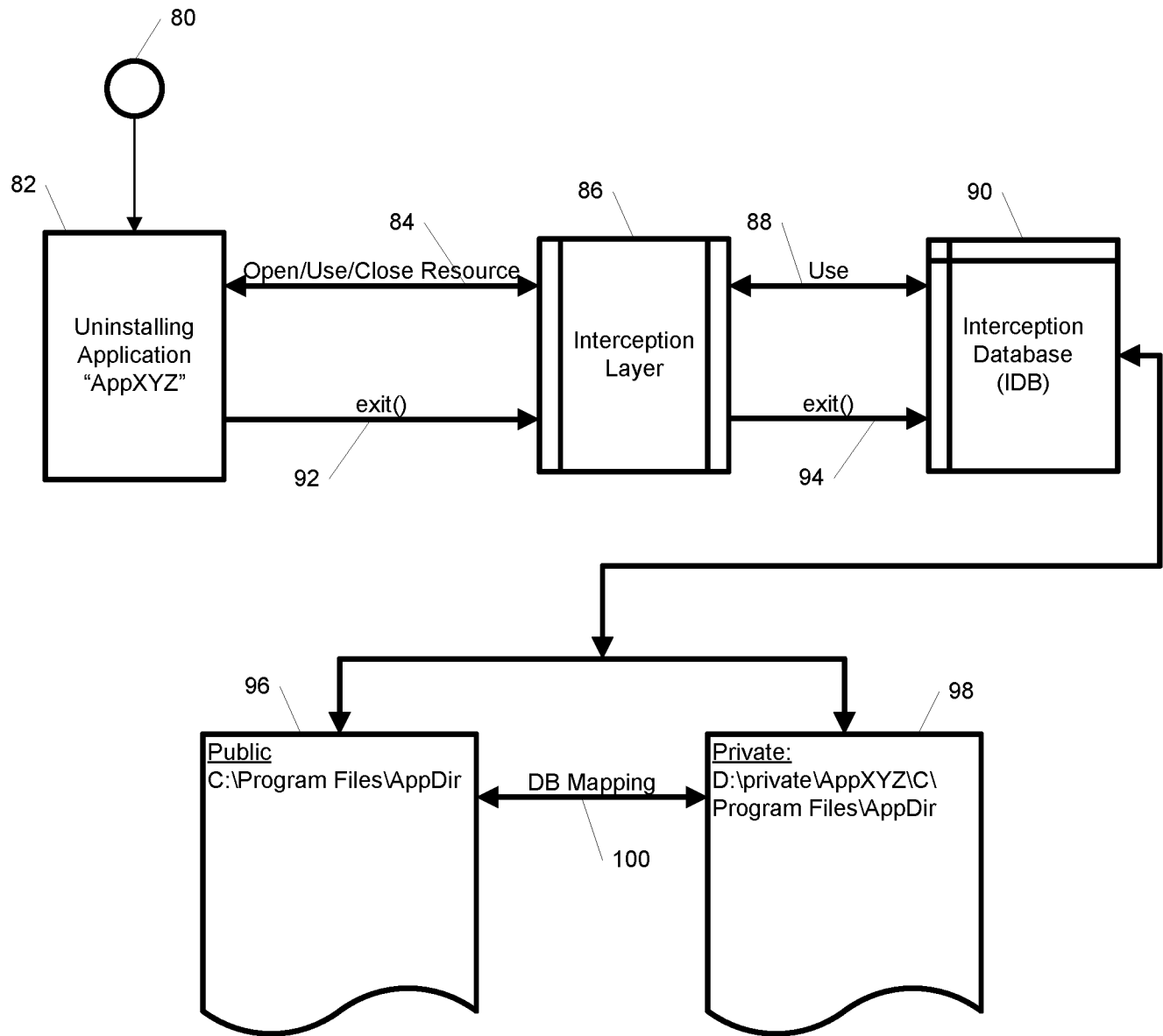


FIG.3 – Un-Installing an Application

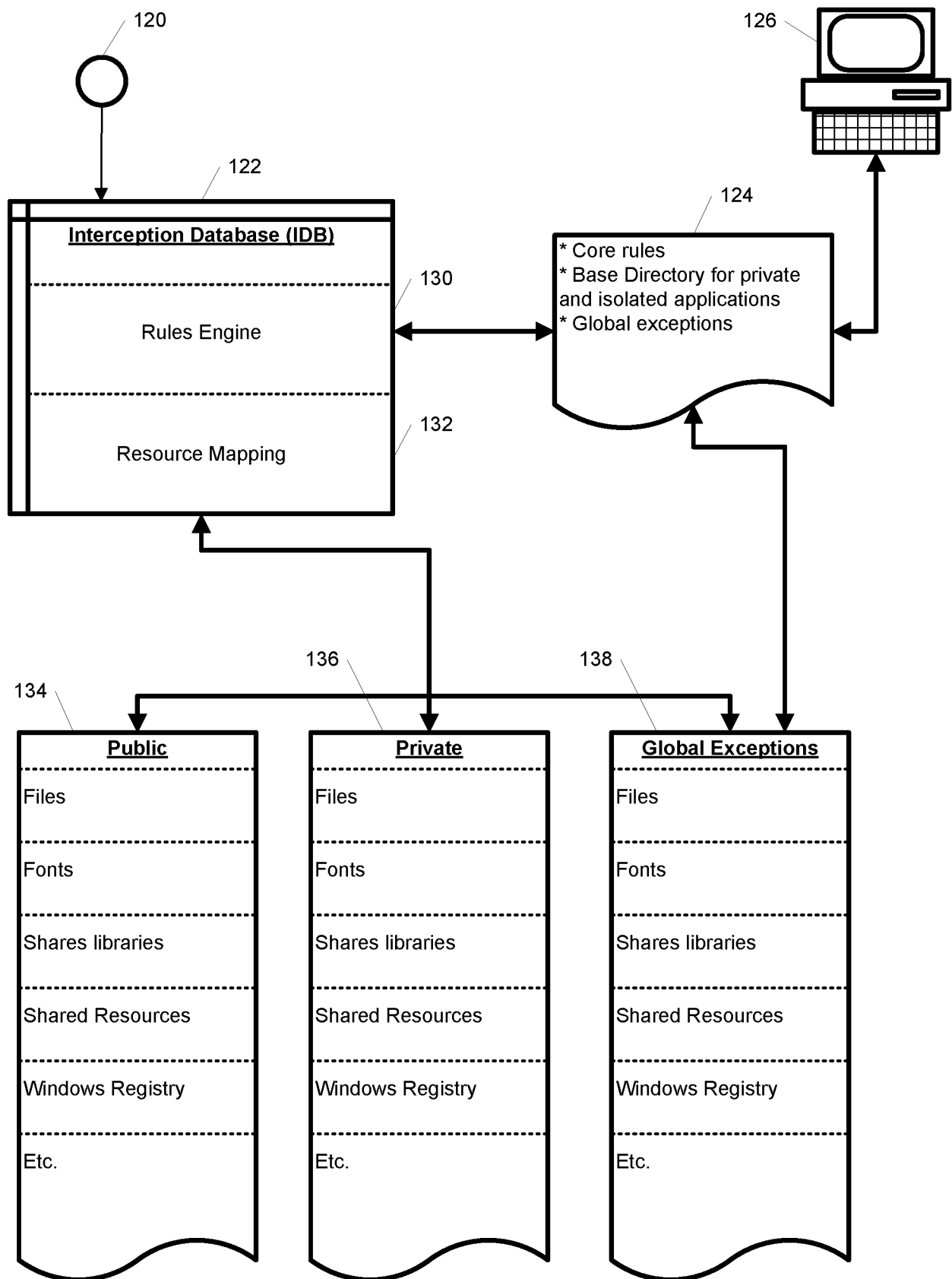


FIG.4 – Interception Database (IDB)

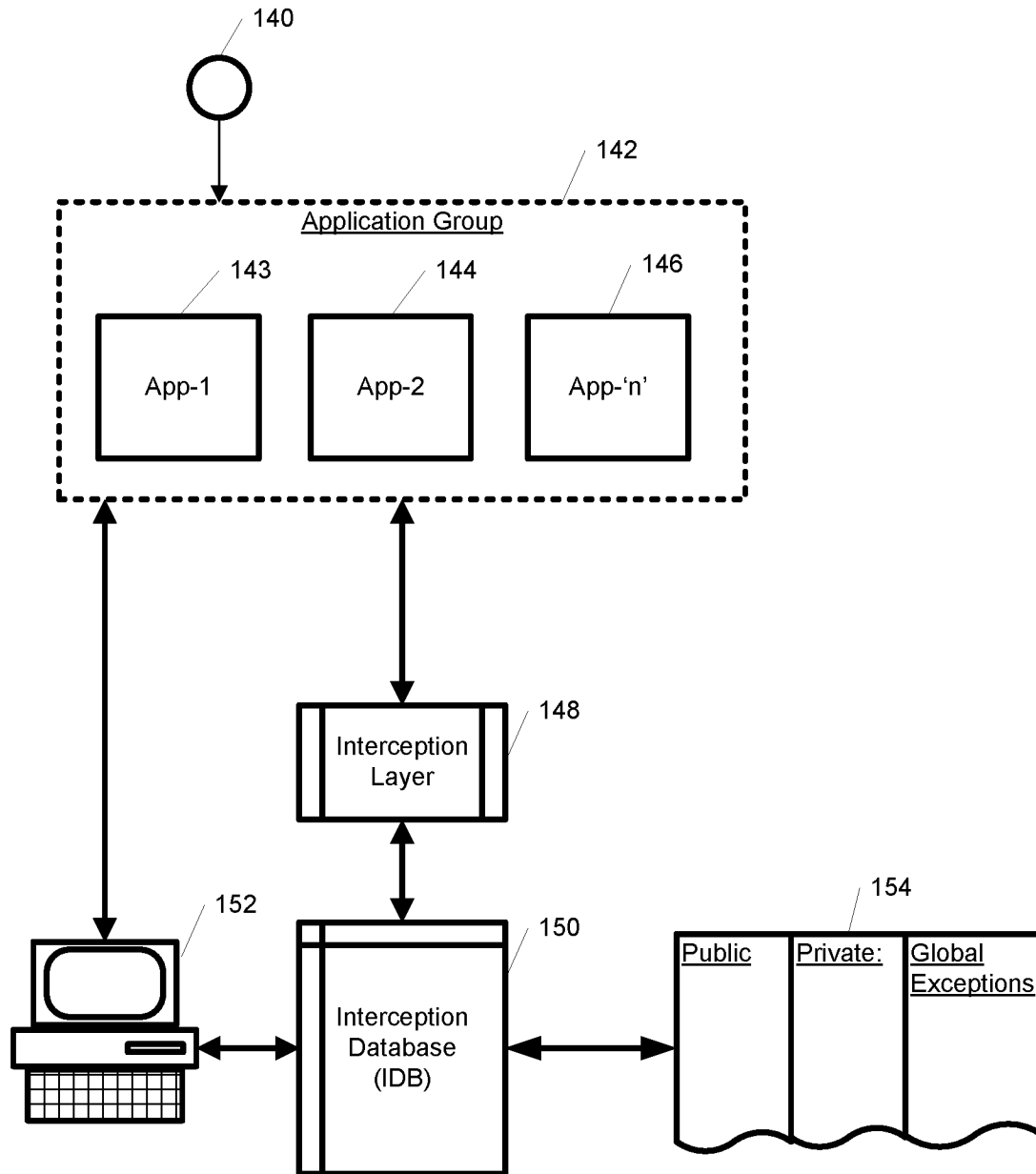


FIG.5 – Application Groups

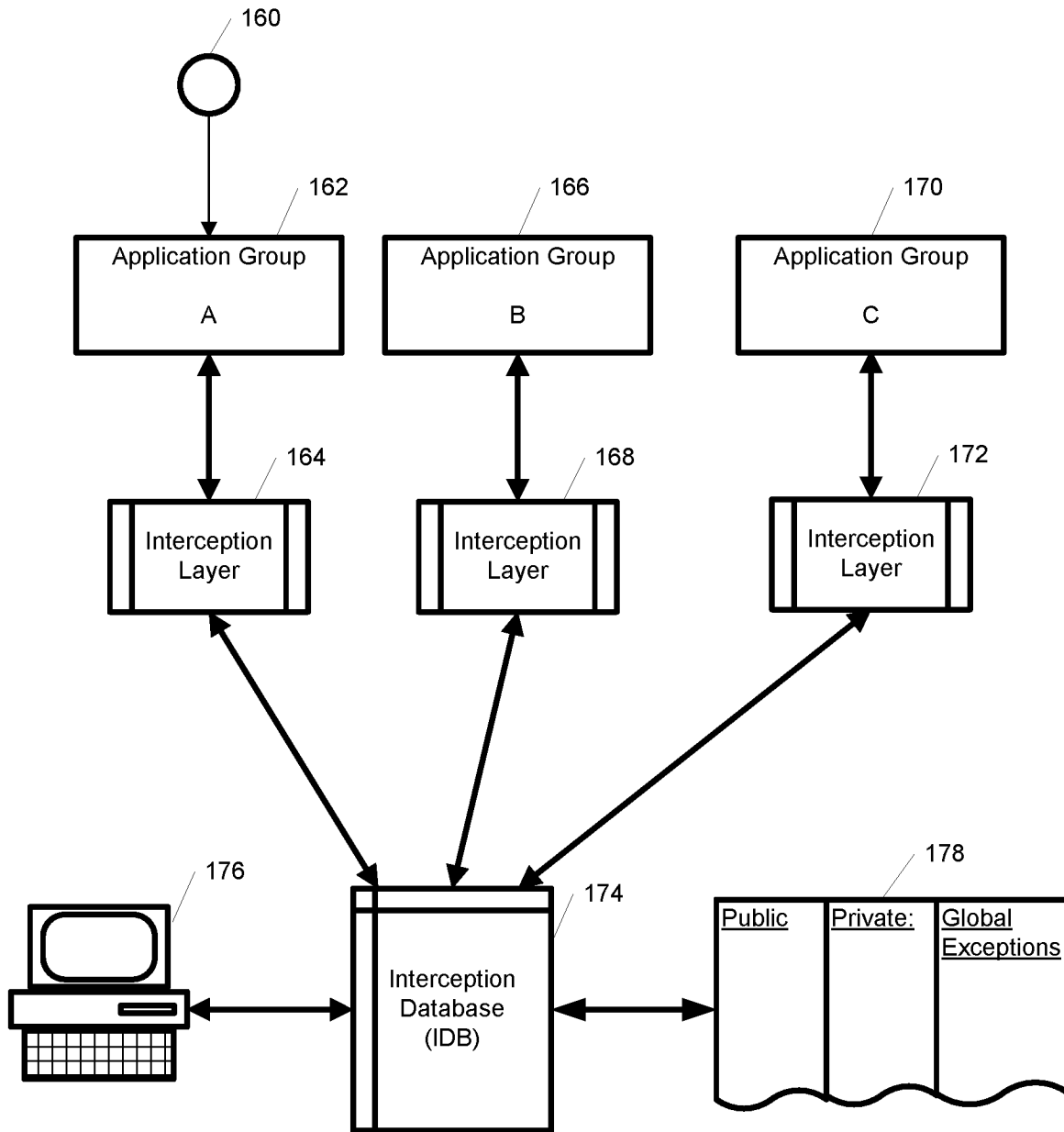


FIG.6 – Multiple Application Groups

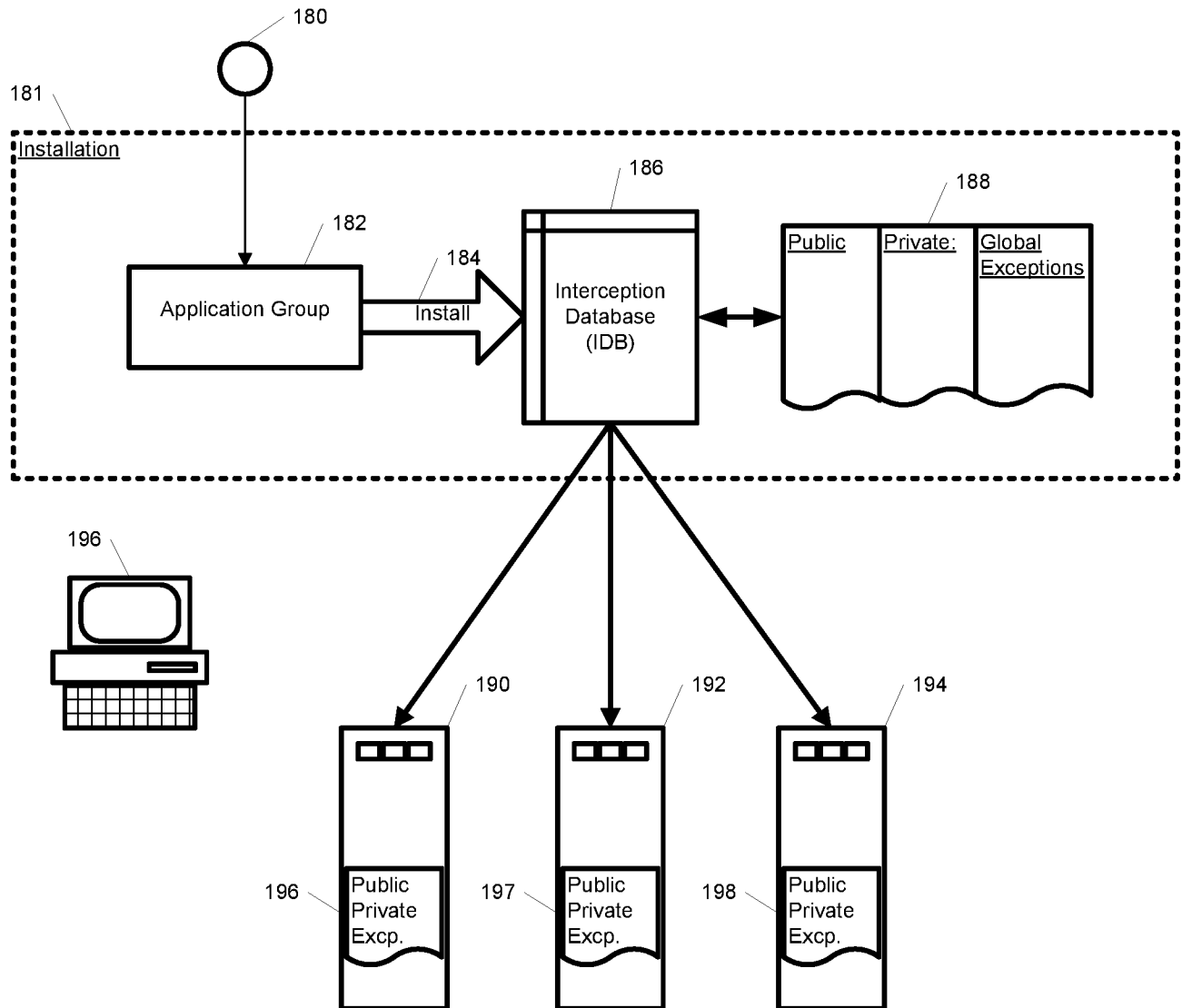


FIG.7 – Installation free deployment

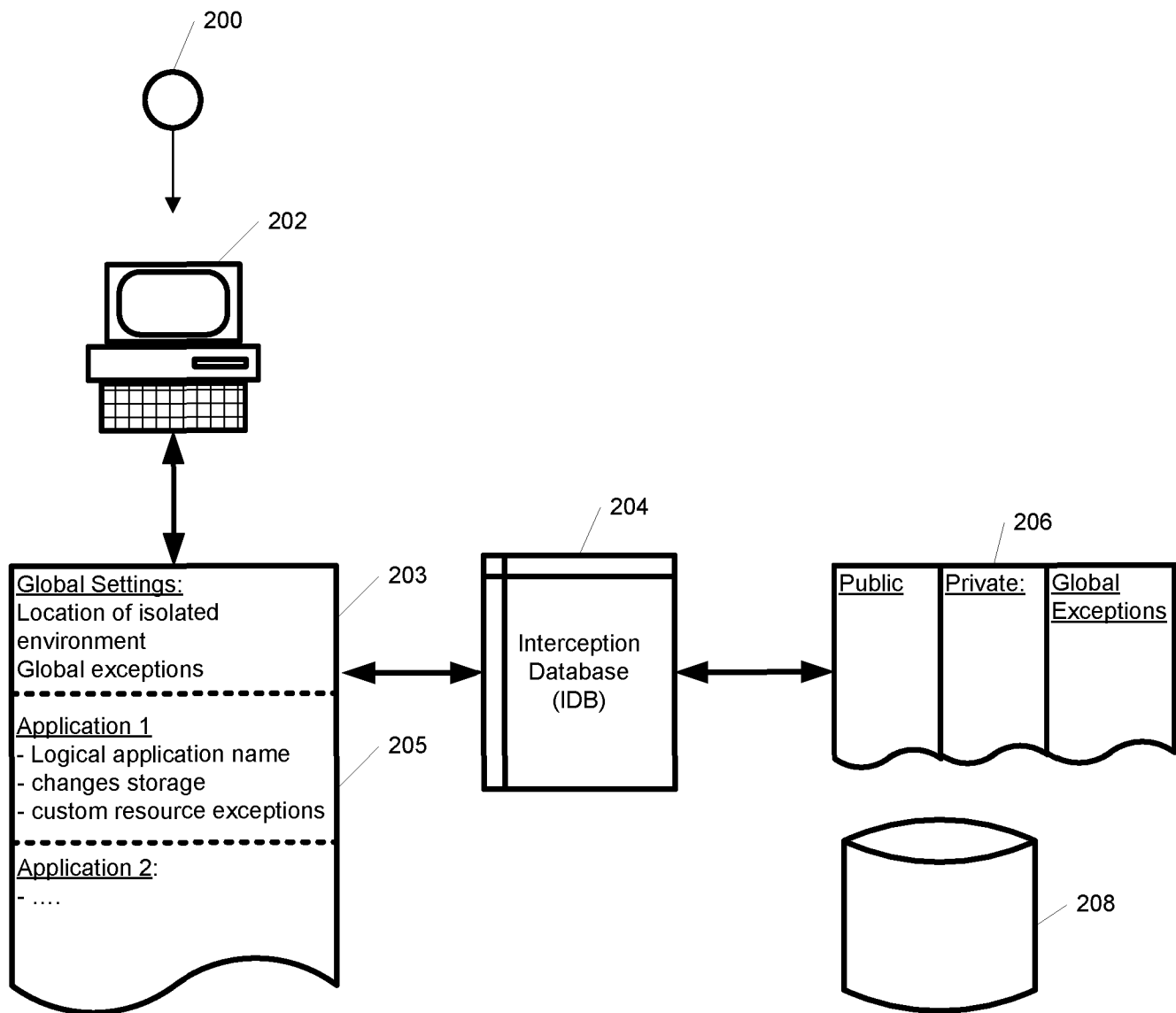


FIG.8 – Administration

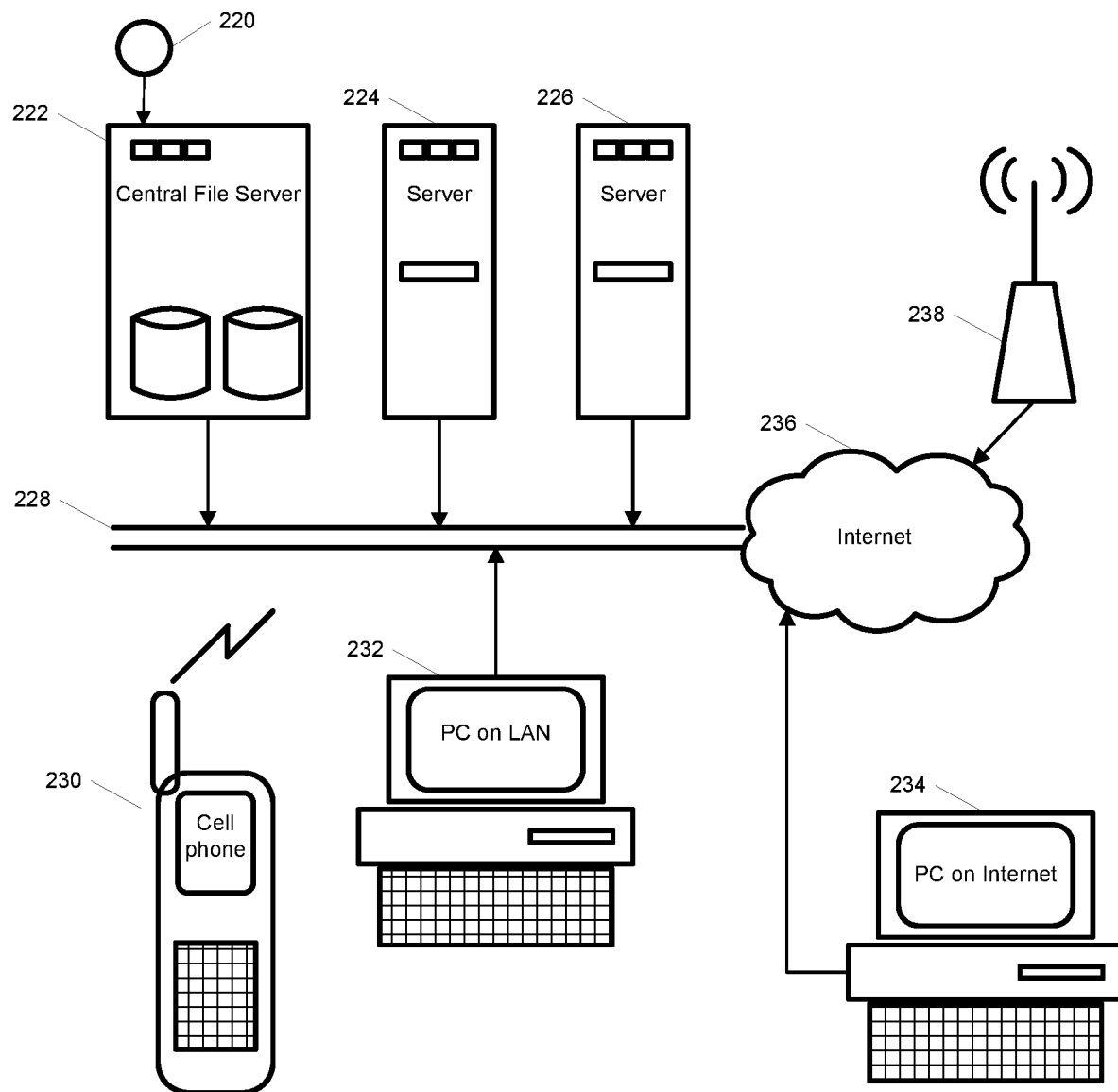


Fig.9 – Deployment scenarios

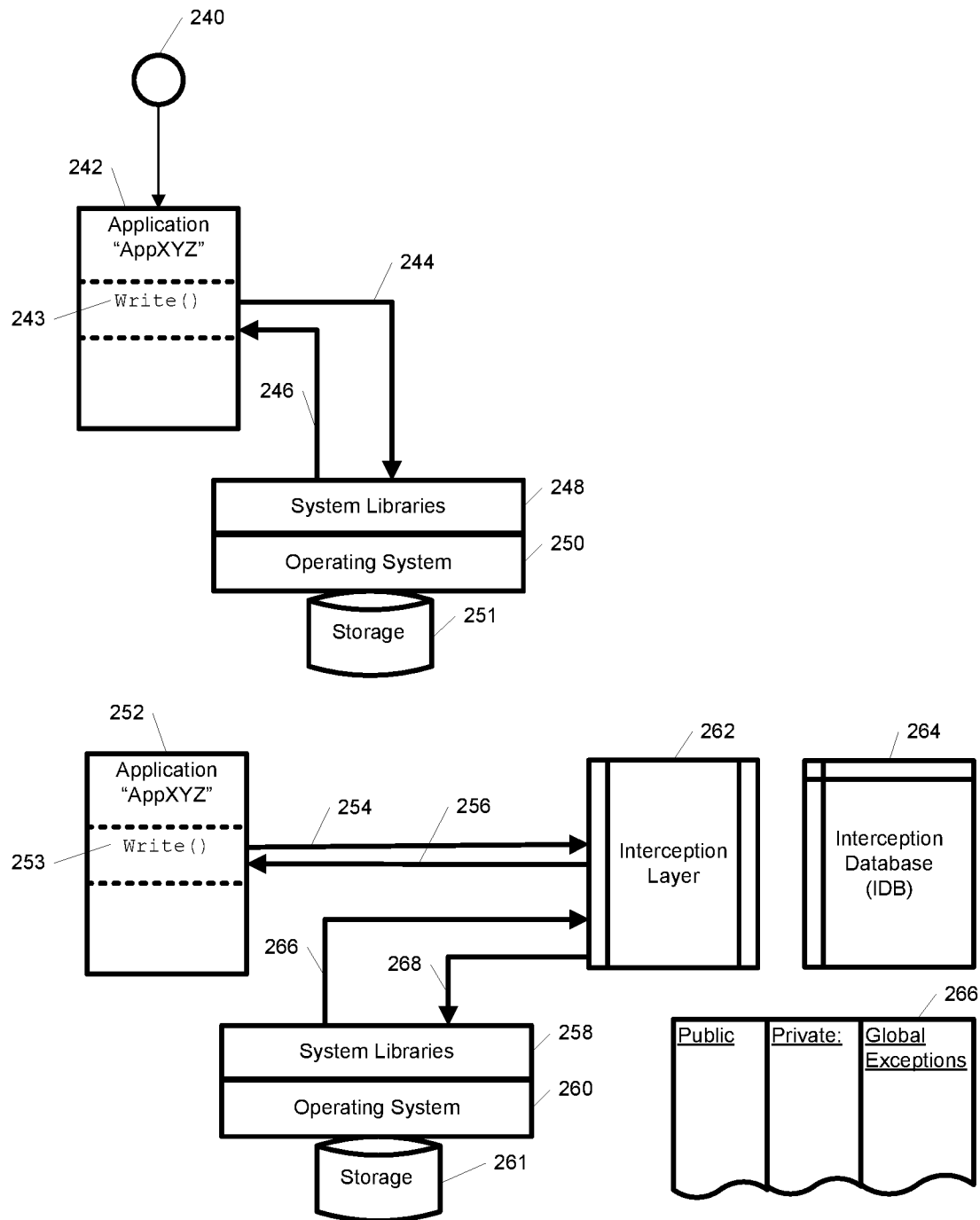


FIG.10 – Detailed control and dataflow

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NONPUBLICATION REQUEST UNDER 35 U.S.C. 122(b)(2)(B)(i)	First Named Inventor		HAVEMOSE, Allan
	Title	SYSTEM AND METHOD FOR APPLICATION IS	
	Attorney Docket Number		Avail0109-C5

I hereby certify that the invention disclosed in the attached application **has not and will not be** the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

I hereby request that the attached application not be published under 35 U.S.C. 122(b).

/Raffi Gostanian/

2019-02-18

Signature

Date

Raffi Gostanain

42595

Typed or printed name

Registration Number, if applicable

972-849-1310

Telephone Number

This request must be signed in compliance with 37 CFR 1.33(b) and submitted with the application **upon filing**.

Applicant may rescind this nonpublication request at any time. If applicant rescinds a request that an application not be published under 35 U.S.C. 122(b), the application will be scheduled for publication at eighteen months from the earliest claimed filing date for which a benefit is claimed.

If applicant subsequently files an application directed to the invention disclosed in the attached application in another country, or under a multilateral international agreement, that requires publication of applications eighteen months after filing, the applicant **must** notify the United States Patent and Trademark Office of such filing within forty-five (45) days after the date of the filing of such foreign or international application. **Failure to do so will result in abandonment of this application (35 U.S.C. 122(b)(2)(B)(iii)).**

This collection of information is required by 37 CFR 1.213(a). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 16/278,659				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	300			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	660			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760			
TOTAL CLAIMS (37 CFR 1.16(j))	20	minus 20 = *			OR	x 100 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *				x 460 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
			TOTAL			TOTAL	1720			
* If the difference in column 1 is less than zero, enter "0" in column 2.										
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.										



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/278,659	02/18/2019	2143	1720	AVAIL0109-C5	20	3

CONFIRMATION NO. 8296

FILING RECEIPT

84646
Proactive Patents LLC
955 Garden Park Drive
Ste 230
Allen, TX 75013



Date Mailed: 03/14/2019

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Allan Havemose, Arroyo Grande, CA;

Applicant(s)

OPEN INVENTION NETWORK LLC, Durham, NC;

Power of Attorney: The patent practitioners associated with Customer Number 84646

Domestic Priority data as claimed by applicant

This application is a CON of 15/641,300 07/04/2017 PAT 10210017
which is a CON of 15/149,518 05/09/2016 PAT 9697038
which is a CON of 14/606,175 01/27/2015 PAT 9336045
which is a CON of 13/708,477 12/07/2012 PAT 8943500
which is a CON of 12/421,691 04/10/2009 PAT 8341631

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 03/12/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/278,659**

Projected Publication Date: Request for Non-Publication Acknowledged

Non-Publication Request: Yes

Early Publication Request: No

Title

SYSTEM AND METHOD FOR APPLICATION ISOLATION

Preliminary Class

715

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 11/30/2020. OMB 0651-0031

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16278659
Filing Date	2019-02-18
First Named Inventor	Allan Havemose
Art Unit	2199
Examiner Name	Lewis Alexander BULLOCK JR
Attorney Docket Number	AVAIL0109-C5

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5774660	A	1998-06-30	Brendel et al.	
	2	5951650	A	1999-09-14	Bell et al.	
	3	5996016	A	1999-11-30	Thalheimer et al.	
	4	6021408	A	2000-02-01	Ledain et al.	
	5	6026499	A	2000-02-15	Shirakihara et al.	
	6	6085086	A	2000-07-04	Porta et al.	
	7	6105148	A	2000-08-15	Chung et al.	
	8	6144999	A	2000-11-07	Khalidi et al.	

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Application Number		16278659
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First Named Inventor	Allan Havemose	
Art Unit	2199	
Examiner Name	Lewis Alexander BULLOCK JR	
Attorney Docket Number	AVAIL0109-C5	

9	6154877	A	2000-11-28	Ramkumar et al.	
10	6161219	A	2000-12-12	Ramkumar et al.	
11	6167385	A	2000-12-26	Hartley-Urquhart	
12	6189111	B1	2001-02-13	Alexander et al.	
13	6269442	B1	2001-07-31	Oberhauser et al.	
14	6314567	B1	2001-11-06	Oberhauser et al.	
15	6321275	B1	2001-11-20	McQuistan et al.	
16	6484276	B1	2002-11-19	Singh et al.	
17	6496847	B1	2002-12-17	Bugnion et al.	
18	6496979	B1	2002-12-17	Chen et al.	
19	6560626	B1	2003-05-06	Hogle et al.	

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Art Unit	2199
Examiner Name	Lewis Alexander BULLOCK JR
Attorney Docket Number	AVAIL0109-C5

20	6574618	B2	2003-06-03	Eylon et al.
21	6601081	B1	2003-07-29	Provino et al.
22	6715238	B2	2004-04-06	Zambelli et al.
23	6718538	B1	2004-04-06	Mathiske
24	6766314	B2	2004-07-20	Burnett
25	6795966	B1	2004-09-21	Lim et al.
26	6823474	B2	2004-11-23	Kampe et al.
27	6941281	B1	2005-09-06	Johnson
28	6964034	B1	2005-11-08	Snow
29	7028305	B2	2006-04-11	Schaefer
30	7058696	B1	2006-06-06	Phillips et al.

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STATEMENT BY APPLICANT**
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First Named Inventor	Allan Havemose
Art Unit	2199
Examiner Name	Lewis Alexander BULLOCK JR
Attorney Docket Number	AVAIL0109-C5

31	7076555	B1	2006-07-11	Orman et al.
32	7089294	B1	2006-08-08	Baskey et al.
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34	7096388	B2	2006-08-22	Singh et al.
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36	7197700	B2	2007-03-27	Honda et al.
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41	7269645	B2	2007-09-11	Goh et al.

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44	7370071	B2	2008-05-06	Greschler et al.
45	7447896	B2	2008-11-04	Smith et al.
46	7467370	B2	2008-12-16	Proudlar et al.
47	7512815	B1	2009-03-31	Munetoh
48	7519963	B1	2009-04-14	Blaser et al.
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50	7543182	B2	2009-06-02	Branda et al.
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52	763308	A	1904-06-21	Mitchell

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53	7673308	B2	2010-03-02	McMillan et al.	
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60	8831995	B2	2014-09-09	Holler et al.	

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U.S.PATENT APPLICATION PUBLICATIONS

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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20020007468	A1	2002-01-17	Kampe et al.	

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2	20020038277	A1	2002-03-28	Yuan	
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93	20140358766	A1	2014-12-04	Nayyar et al.
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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	KARABLIEH et al.; "Heterogeneous Checkpointing for Multithread Applications", IEEE 21st Symposium on Reliable Distributed Systems, October 13-16, 2002, pp. 140-149.	

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Attorney Docket Number	AVAIL0109-C5

2	MEDINA, "Understanding AIE to Citrix Presentation Server 4", May 12, 2005, Tech Target
3	NAM et al., "Probabilistic Checkpointing", IEICE Trans. Inf. & Syst., Vol, E85-D, No. 7, July 2002, pp. 1093-1104.
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Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

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Art Unit	2199
Examiner Name	Lewis Alexander BULLOCK JR
Attorney Docket Number	AVAIL0109-C5

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Raffi Gostanian/	Date (YYYY-MM-DD)	2019-05-19
Name/Print	Allan Havemose	Registration Number	42595

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Electronic Acknowledgement Receipt

EFS ID:	36051423
Application Number:	16278659
International Application Number:	
Confirmation Number:	8296
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION
First Named Inventor/Applicant Name:	Allan Havemose
Customer Number:	84646
Filer:	Raffi Gostanian/Josephine Johnson
Filer Authorized By:	Raffi Gostanian
Attorney Docket Number:	AVAIL0109-C5
Receipt Date:	19-MAY-2019
Filing Date:	18-FEB-2019
Time Stamp:	09:48:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	AVAIL0109C5_IDS.pdf	1057162	no	18
			db430a4304edfbd444f93b94b0c2e89650a3f2a		

Warnings:

Case 2:24-cv-00093-JRG Document 114-7 Filed 12/19/24 Page 77 of 242 PageID #: 6741					
Information:					
2	Non Patent Literature	NPL-Karablieh.pdf	808269	no	10
			a2ee105ff738ae8feab70a0ddd8a647bccf525af		
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3	Non Patent Literature	NPL_Sancho.pdf	842683	no	10
			923c07c956f9ffe0fc9bc7854ec203804ac00864		
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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/278,659	02/18/2019	Allan Havemose	AVAIL0109-C5	8296
84646	7590	07/30/2019	EXAMINER	
Proactive Patents LLC 955 Garden Park Drive Ste 230 Allen, TX 75013			WU, QING YUAN	
			ART UNIT	PAPER NUMBER
			2199	
			NOTIFICATION DATE	DELIVERY MODE
			07/30/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

eofficeaction@appcoll.com
mzarinelli@proactivepatents.com

Office Action Summary**Application No.**

16/278,659

Applicant(s)

Havemose, Allan

Examiner

QING YUAN WU

Art Unit

2199

AIA (FITF) Status

No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 5/19/19.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2a) ☐ This action is **FINAL**.

2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☒ Claim(s) 1-20 is/are pending in the application.

5a) Of the above claim(s) ____ is/are withdrawn from consideration.

6) ☐ Claim(s) ____ is/are allowed.

7) ☒ Claim(s) 1-20 is/are rejected.

8) ☐ Claim(s) ____ is/are objected to.

9) ☐ Claim(s) ____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☒ The drawing(s) filed on 2/18/19 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some** c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

3) ☐ Interview Summary (PTO-413)

Paper No(s)/Mail Date ____.

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)

4) ☐ Other: ____.

Paper No(s)/Mail Date 5/19/19.

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Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

2. Claims 1-20 are presented for examination.

Claim Objections

3. Claim 16 is objected to because of the following informalities: “The method **of claim** of claim 14” should read “The method of claim 14”. Appropriate correction is required.

Double Patenting

4. A rejection based on double patenting of the “same invention” type finds its support in the language of 35 U.S.C. 101 which states that “whoever invents or discovers any new and useful process... may obtain a patent therefor...” (Emphasis added). Thus, the term “same invention,” in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the claims that are directed to the same invention so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

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Claim 5 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 5 of prior U.S. Patent No. 10,210,017 (Note: dependent claim(s) include every limitation of the claim from which it depends and that it specify a further limitation(s) of the subject matter claimed). Claims 16 and 19 are rejected for the same reason as claim 5 above with respect to claims 16 and 19 of patent '017. This is a statutory double patenting rejection.

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the claims at issue are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the reference application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

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The USPTO internet Web site contains terminal disclaimer forms which may be used. Please visit <http://www.uspto.gov/forms/>. The filing date of the application will determine what form should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to <http://www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp>.

Claim 1 is rejected on the ground of nonstatutory double patenting as being anticipated by claim 5 (i.e. claims 1 and 5) of US Patent US Patent 10,210,017 (hereafter '017) such that claim 5 of patent '017 include all the limitations of claim 1. Below is an example of how claim 1 of the instant application is being anticipated by claim 5 of patent '017.

Claims 2-13 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-13 of patent '017 (i.e. claim 5 of the instant application is in claim 1 of patent '017). Although the claims at issue are not identical when taken as a whole, the differences being location within the claim hierarchy. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have recognized that implementing claims in different claim hierarchy are well known in the art and would have been a matter of design choice.

Claim 14 is rejected on the ground of nonstatutory double patenting as being anticipated by claim 16 (i.e. claims 14 and 16) of patent '017 such that claim 16 of patent '017 include all the limitations of claim 14.

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Claims 15 and 17 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 14-17 of patent '017 for the same reason as claims 2-13 above.

Claim 18 is rejected on the ground of nonstatutory double patenting as being anticipated by claim 19 (i.e. claims 18 and 19) of patent '017 such that claim 18 of patent '017 include all the limitations of claim 18.

Claim 20 is rejected on the ground of nonstatutory double patenting as being unpatentable over claims 18-20 of patent '017 for the same reason as claims 2-13 above.

US Patent 10,210,017	Instant Application
1. A system, comprising: one or more central processing units; one or more isolated environments including one or more applications; and an interception database configured to maintain mapping between host operating system resources inside the one or more isolated environments and outside the one or more isolated environments; wherein the one or more central processing units and the one or more isolated environments are configured to interact with each other;	1. A system, comprising: one or more central processing units; one or more isolated environments including one or more applications; and an interception database configured to maintain mapping between host operating system resources inside the one or more isolated environments and outside the one or more isolated environments; wherein the one or more central processing units and the one or more isolated environments are configured to interact with each other;

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<p>wherein updates to the one or more isolated environments occur as the one or more applications use additional resources; and</p> <p>wherein uninstalling an application of the one or more applications comprises one or more of removing one or more mappings in said interception database for said application, uninstalling said application, archiving one or more isolated environments, and removing isolated environment information from storage.</p>	<p><i>wherein the one or more isolated environments are created during installation of the one or more applications; and</i></p> <p>wherein uninstalling an application of the one or more applications comprises one or more of removing one or more mappings in said interception database for said application, uninstalling said application, archiving one or more isolated environments, and removing isolated environment information from storage.</p>
<p>5. The system according to claim 1, wherein the one or more isolated environments are created during installation of the one or more applications.</p>	

Claim 1 is additionally rejected on the ground of nonstatutory double patenting as being unpatentable over claim 5 (1 and 5) of U.S. Patent No. 9,697,038 (hereafter '038). Although the claims at issue are not identical, they are not patentably distinct from each other because claim 1 is anticipated by claim 5 of patent '038 such that claim 5 of patent '038 contain all the limitations of claim 1 of the instant application. Claim 1 of the instant application therefore is not patently

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distinct from claim 5 of patent '038 and as such is unpatentable for obviousness-type double patenting. Below is an example of how claim 1 of the instant application is being anticipated by claim 1 of patent '038.

Claims 2-4 and 6-13 are rejected on the ground of nonstatutory double patenting respectively by claims 1-13 of patent '038 such that claims 1-13 of patent '038 teach all the limitations of claims 2-4 and 6-13 of the instant application aside from being located in a different claim hierarchy. As an example, claim 5 of '038 is recited in claim 1 of the instant application whereas claim 5 of the instant applicant is disclosed in claim 1 of '038. However, implementing claims in different claim hierarchy are well known in the art, such that a person of ordinary skill in the art at the time the invention was made would have modified the claim hierarchy without changing the scope of the claim as a matter of design choice.

Claims 14-20 are rejected by claims 14-20 of patent '038 for similar reason as applied to claims 1-4 and 6-13 above.

US Patent 9,697,038	Instant Application
1. A system, comprising: one or more central processing units; and one or more isolated environments including one or more applications;	1. A system, comprising: one or more central processing units; one or more isolated environments including one or more applications; and an interception database configured to maintain mapping between host operating system resources inside the one or more

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<p>wherein the one or more central processing units and the one or more isolated environments are configured to interact with each other;</p> <p>wherein the one or more isolated environments are created during installation of the one or more applications;</p> <p>wherein updates to the one or more isolated environments occur as the one or more applications use additional resources; and</p> <p>wherein the one or more isolated environments are copied to storage and then removed as part of an uninstall of the one or more applications.</p> <p>5. The system according to claim 1 comprising an interception database configured to maintain mapping between host operating system resources inside the one or more isolated environments and outside.</p>	<p>isolated environments and outside the one or more isolated environments;</p> <p>wherein the one or more central processing units and the one or more isolated environments are configured to interact with each other;</p> <p>wherein the one or more isolated environments are created during installation of the one or more applications; and</p> <p>wherein uninstalling an application of the one or more applications comprises <i>one or more of</i> removing one or more mappings in said interception database for said application, uninstalling said application, archiving one or more isolated environments, and removing isolated environment information from storage.</p>
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Claim 1 is additionally rejected on the ground of nonstatutory double patenting as being unpatentable over claim 5 (1 and 5) of U.S. Patent No. 9,336,045 (hereafter '045). Although the claims at issue are not identical, they are not patentably distinct from each other because claim 1 is anticipated by claim 5 of patent '045 such that claim 5 of patent '045 contain all the limitations of claim 1 of the instant application. Claim 1 of the instant application therefore is not patently distinct from claim 5 of patent '045 and as such is unpatentable for obviousness-type double patenting. Below is an example of how claim 1 of the instant application is being anticipated by claim 1 of patent '045.

Claims 2-13 are rejected on the ground of nonstatutory double patenting respectively by claims 2-13 of patent '045 such that claims 2-13 of patent '045 teach all the limitations of claims 2-13 of the instant application aside from being located in a different claim hierarchy. As an example, claim 5 of '045 is recited in claim 1 of the instant application whereas claim 5 of the instant applicant is disclosed in claim 1 of '045. However, implementing claims in different claim hierarchy are well known in the art, such that a person of ordinary skill in the art at the time the invention was made would have modified the claim hierarchy without changing the scope of the claim as a matter of design choice.

Claims 14-20 are rejected by claims 14-20 of patent '045 for similar reason as applied to claims 1-13 above.

US Patent 9,336,045	Instant Application
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<p>1. A system, comprising:</p> <p>one or more central processing units; and</p> <p>one or more isolated environments</p> <p>including one or more applications and</p> <p>executables;</p> <p>wherein the one or more central processing</p> <p>units and the one or more isolated</p> <p>environments are configured to interact</p> <p>with each other;</p> <p>wherein the one or more isolated</p> <p>environments are created during</p> <p>installation of the one or more applications,</p> <p>and updates to the one or more isolated</p> <p>environments occur as the one or more</p> <p>applications use additional resources;</p> <p>wherein the one or more isolated</p> <p>environments are copied to storage and then</p> <p>removed as part of an uninstall of the one or</p> <p>more applications.</p>	<p>1. A system, comprising:</p> <p>one or more central processing units;</p> <p>one or more isolated environments</p> <p>including one or more applications; and</p> <p>an interception database configured to</p> <p>maintain mapping between host operating</p> <p>system resources inside the one or more</p> <p>isolated environments and outside the one</p> <p>or more isolated environments;</p> <p>wherein the one or more central processing</p> <p>units and the one or more isolated</p> <p>environments are configured to interact with</p> <p>each other;</p> <p>wherein the one or more isolated</p> <p>environments are created during installation</p> <p>of the one or more applications; and</p> <p>wherein uninstalling an application of the</p> <p>one or more applications comprises <i>one or</i></p> <p><i>more of</i> removing one or more mappings in</p> <p>said interception database for said</p> <p>application, uninstalling said application,</p> <p>archiving one or more isolated</p>
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5. The system according to claim 1 comprising an interception database configured to maintain mapping between host operating system resources inside the one or more isolated environments and outside.	environments, and removing isolated environment information from storage.
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Claim 1 is additionally rejected on the ground of nonstatutory double patenting as being unpatentable over claim 5 (1 and 5) of U.S. Patent No. 8,943,500 (hereafter '500). Although the claims at issue are not identical, they are not patentably distinct from each other because claim 1 is anticipated by claim 5 of patent '500 such that claim 5 of patent '500 contain all the limitations of claim 1 of the instant application. Claim 1 of the instant application therefore is not patently distinct from claim 5 of patent '500 and as such is unpatentable for obviousness-type double patenting. Below is an example of how claim 1 of the instant application is being anticipated by claim 1 of patent '500.

Claims 2-13 are rejected on the ground of nonstatutory double patenting respectively by claims 2-13 of patent '500 such that claims 2-13 of patent '500 teach all the limitations of claims 2-13 of the instant application aside from being located in a different claim hierarchy. As an example, claim 5 of '500 is recited in claim 1 of the instant application whereas claim 5 of the instant applicant is disclosed in claim 1 of '500. However, implementing claims in different claim hierarchy are well known in the art, such that a person of ordinary skill in the art at the

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time the invention was made would have modified the claim hierarchy without changing the scope of the claim as a matter of design choice.

Claims 14-20 are rejected by claims 14-20 of patent ‘500 for similar reason as applied to claims 1-13 above.

US Patent 8,943,500	Instant Application
<p>1. A system, comprising:</p> <p>one or more central processing units; and</p> <p>one or more isolated environments</p> <p>including one or more applications and</p> <p>executables;</p> <p>wherein the one or more central processing</p> <p>units and the one or more isolated</p> <p>environments are configured to interact</p> <p>with each other;</p> <p>wherein the one or more isolated</p> <p>environments are created during</p>	<p>1. A system, comprising:</p> <p>one or more central processing units;</p> <p>one or more isolated environments</p> <p>including one or more applications; and</p> <p>an interception database configured to</p> <p>maintain mapping between host operating</p> <p>system resources inside the one or more</p> <p>isolated environments and outside the one</p> <p>or more isolated environments;</p> <p>wherein the one or more central processing</p> <p>units and the one or more isolated</p> <p>environments are configured to interact with</p> <p>each other;</p> <p>wherein the one or more isolated</p> <p>environments are created during installation</p> <p>of the one or more applications; and</p>

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<p>installation of the one or more applications,</p> <p>and updates to the one or more isolated environments occur as the one or more applications use additional resources;</p> <p>wherein the one or more isolated environments are removed as part of an uninstall of the one or more applications;</p> <p>wherein the one or more isolated environments are stored for retrieval at a later time after the uninstall of the one or more applications.</p> <p>5. The system according to claim 1 comprising an interception database configured to maintain mapping between host operating system resources inside the one or more isolated environments and outside.</p>	<p>wherein uninstalling an application of the one or more applications comprises <i>one or more of</i> removing one or more mappings in said interception database for said application, uninstalling said application, archiving one or more isolated environments, and removing isolated environment information from storage.</p>
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Claims 1-13 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 and 3-10 of U.S. Patent No. 8,341,631 (hereafter '631). Although the claims at issue are not identical, they are not patentably distinct from each other because claims

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1-13 are anticipated by claims 1 and 3-10 of patent '631 such that claims 1 and 3-10 of patent '631 contain all the limitations of claims 1-13 of the instant application. Claims 1-13 of the instant application therefore are not patently distinct from claims 1 and 3-10 of patent '631 and as such are unpatentable for obviousness-type double patenting. Below is an example of how claims 1-3 of the instant application is being anticipated by claim 1 of patent '631.

Claims 14-20 are rejected by claims 11-12 of patent '631 for similar reason as applied to claims 1-13 above.

US Patent 8,341,631	Instant Application
<p>1. A system for providing application isolation to one or more applications, the system comprising:</p> <p>one or more central processing units configured to interact with:</p> <p>one or more isolated environments including application files and executables; one or more interception layers configured to intercept access to host operating system resources and host operating system interfaces;</p> <p>an interception database configured to maintain mapping between the system</p>	<p>1. A system, comprising:</p> <p>one or more central processing units;</p> <p>one or more isolated environments including one or more applications; and</p> <p>an interception database configured to maintain mapping between host operating</p>

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<p>resources inside the one or more isolated environments and outside;</p> <p>wherein the one or more applications are isolated from other applications and the host operating system while running within the one or more isolated environments; and</p> <p>wherein the one or more isolated environments are created during installation of the one or more applications,</p> <p>and updates to the one or more isolated environments occur as the one or more applications use additional resources while running; wherein the one or more isolated environments are removed as part of</p> <p>uninstalling the one or more applications;</p> <p>wherein the one or more isolated environments are stored for retrieval at a later</p>	<p>system resources inside the one or more isolated environments and outside the one or more isolated environments;</p> <p>wherein the one or more central processing units and the one or more isolated environments are configured to interact with each other;</p> <p>wherein the one or more isolated environments are created during installation of the one or more applications; and</p> <p>wherein uninstalling an application of the one or more applications comprises <i>one or more of</i> removing one or more mappings in said interception database for said application, uninstalling said application, archiving one or more isolated</p>
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time after the one or more applications are uninstalled.	<p>environments, and removing isolated environment information from storage.</p> <p>2. The system according to claim 1, wherein the one or more applications are isolated from other applications and a host operating system while the one or more applications run within the one or more isolated environments. (see claim 1 of patent '631)</p> <p>3. The system according to claim 1 comprising one or more interception layers configured to intercept access to host operating system resources and host operating system interfaces. (see claim 1 of patent '631)</p>
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Allowable Subject Matter

6. Claims 1-20 would be allowable by overcoming the double patenting rejections above.
7. The following is a statement of reasons for the indication of allowable subject matter:

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The prior arts of record when taken individually or in combination do not expressly teach or render obvious, in the context of the claims taken as a whole, the invention as recited in independent claims 1, 14 and 18.

Providing application isolation to one or more applications by means of intercepting access to system resources and interfaces at one or more interception layers [accesses to file system and API from application running in a virtual OS environment are intercepted, col. 2, lines 55-64; col. 3, lines 11-48]; maintaining mapping between the system resources inside one or more isolated environments and outside [redirecting of base/main OS file system calls and registry API calls to instead call functions within the injected DLL to be redirected to virtual OS environment location, col. 3, lines 20-39; col. 4, lines 38-45 and 47-51; Figs. 5-7]; and isolating the one or more applications from other applications and a host operating system while running within the one or more isolated environments [application(s) running in any virtual OS environment(s) is isolated from other applications and the base/main OS, col. 2, lines 57-64; col. 3, lines 13-46]; wherein the one or more isolated environments are stored on a local storage; wherein the one or more isolated environments are stored on a networked storage and the one or more applications are delivered over a network [virtual OS environment(s) are stored locally or separately such that used of the virtual OS environment(s) having application within constitute downloading, col. 3, lines 17-20; col. 4, lines 57-65]; wherein the one or more interception layers intercept calls to the host operating system and system libraries created by the one or more applications, and using the interception database, translate parameters and context between a host environment and the one or more isolated environments [col. 2, lines 55-64; col. 3, lines 11-48; col. 4, lines 38-45 and 47-51; Figs. 5-7]; wherein each of the one or more applications is installed into its own isolated environment; wherein two or more applications are installed into a shared

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isolated environment [one or more applications can run in a virtual OS environment, col. 2, lines 62-64; col. 3, lines 20-26]; wherein the two or more applications share resources inside the shared isolated environment [col. 3, lines 1-4]; and wherein two or more applications are installed into separate isolated environments and the one or more applications run concurrently in the separate isolated environments [col. 2, lines 55-64] was disclosed in US Patent 7,673,308. US Patent 7,673,308 was cited in applicant's IDS filed on 5/19/19. Creation of isolated storage for installed application and reclaiming or deleting the application isolated storage and/or data within the application isolated storage when the application is subsequently uninstalled [abstract; Fig. 3 and corresponding text] was disclosed in US Patent 7,380,087. The prior arts of record when taken individually or in combination do not expressly teach or render obvious the invention a whole as recited in independent claims 1, 14 and 18.

Neither a reference uncovered that would have provided a basis of evidence for asserting a motivation, nor one of ordinary skilled in the art before the effective filing date of the claimed invention, knowing the teaching of the prior arts of record would have combined them to arrive at the present invention as recited in the context of independent claims 1, 14 and 18 as a whole.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to QING YUAN WU whose telephone number is (571)272-3776. The examiner can normally be reached on M-F 9AM-6PM EST.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is

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encouraged to use the USPTO Automated Interview Request (AIR) at
<http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on 571-272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/QING YUAN WU/
Primary Examiner, Art Unit 2199**

<i>Notice of References Cited</i>	Application/Control No. 16/278,659		Applicant(s)/Patent Under Reexamination Havemose, Allan	
	Examiner QING YUAN WU		Art Unit 2199	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-7380087-B2	05-2008	Johnson; Bruce E.	G06F16/10	711/170
	B					
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					


FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	


*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Index of Claims</i> 	Application/Control No. 16/278,659	Applicant(s)/Patent Under Reexamination Havemose, Allan
	Examiner QING YUAN WU	Art Unit 2199

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

[illegible]

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<i>Search Notes</i> 	Application/Control No. 16/278,659	Applicant(s)/Patent Under Reexamination Havemose, Allan
	Examiner QING YUAN WU	Art Unit 2199

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
G06F9/4\$5.cpc. G06F2009/455\$2.cpc. G06F9/50\$2.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc. [Combination of classification and text search in EAST - see search history]	07/24/2019	QW
Inventor name search	07/24/2019	QW
NPL search in Google, Google Scholar and IP.com	07/24/2019	QW

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

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Doc code: IDS

#: 6765

PTO/SB/08a (02-18)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 11/30/2020. OMB 0651-0031

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)

Application Number	16278659
Filing Date	2019-02-18
First Named Inventor	Allan Havemose
Art Unit	2199
Examiner Name	Lewis Alexander BULLOCK JR
Attorney Docket Number	AVAIL0109-C5

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5774660	A	1998-06-30	Brendel et al.	
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	4	6021408	A	2000-02-01	Ledain et al.	
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Examiner Signature	/QING YUAN WU/	Date Considered	07/24/2019
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CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Raffi Gostanian/	Date (YYYY-MM-DD)	2019-05-19
Name/Print	Allan Havemose	Registration Number	42595

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Bibliographic Data

Application No: 16/278,659

Foreign Priority claimed:

☐ Yes☒ No

35 USC 119 (a-d) conditions met:

☐ Yes☒ No☐ Met After Allowance

Verified and Acknowledged:

/QING YUAN WU/

Examiner's Signature

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Title:

SYSTEM AND METHOD FOR APPLICATION ISOLATION

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
02/18/2019	717	2199	AVAIL0109-C5
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APPLICANTS

OPEN INVENTION NETWORK LLC, Durham, NC,

INVENTORS

Allan Havemose Arroyo Grande, CA, UNITED STATES

CONTINUING DATA

This application is a CON of 15641300 07/04/2017 PAT 10210017

15641300 is a CON of 15149518 05/09/2016 PAT 9697038

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<input type="checkbox"/>	10:00 PM		DAV - 16/278,659 - SYSTEM AND METHOD FOR APPLICATION ISOLATION	dav.uspto.gov	
<input type="checkbox"/>	8:45 PM		DAV - 12/421,691 - SYSTEM AND METHOD FOR APPLICATION ISOLATION	dav.uspto.gov	
<input type="checkbox"/>	8:27 PM		InnovationQ Plus - IP.com	iq.ip.com	
<input type="checkbox"/>	8:21 PM		uninstalling application remove isolated environment - Google Scholar	scholar.google.com	
<input type="checkbox"/>	8:21 PM		Google Scholar	scholar.google.com	
<input type="checkbox"/>	8:21 PM		About Google Scholar	scholar.google.com	
<input type="checkbox"/>	8:21 PM		Our products Google	about.google	
<input type="checkbox"/>	8:21 PM		Our products Google	about.google	
<input type="checkbox"/>	8:21 PM		uninstallation of application remove associated sandbox - Google Search	www.google.com	
<input type="checkbox"/>	8:20 PM		uninstallation of application remove sandbox - Google Search	www.google.com	
<input type="checkbox"/>	8:20 PM		uninstallation of application removes sandbox - Google Search	www.google.com	
<input type="checkbox"/>	8:20 PM		dynamic sandbox creation - Google Search	www.google.com	

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S883	1	"10210017".pn.	US-PGPUB; USPAT	OR	OFF	2019/07/24 13:06
S884	6	"42935364".FMID.	US-PGPUB; USPAT; FPRS	OR	OFF	2019/07/24 15:34
S938	4	orphan\$3 with (virtual near machine (vm)) with (application program software)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S937	86	S936 and S930	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:51
S936	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:51
S935	162	S934 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S934	221	S933 and S932	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S933	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S932	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S931	23	S929 and S930	US-PGPUB;	OR	OFF	2019/07/24

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:51
S930	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:51
S929	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:51
S928	36	"8341631"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S927	6	"12421694"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S926	23	S923 and S924	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:51
S925	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:51
S924	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:51
S923	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:51
S922	280	("20020007468" "20020087916" "20020124089" "20020169884" "20020174265" "20030018927"	US-PGPUB; USPAT; FPRS;	OR	ON	2019/07/24 17:51

		"20030028635" "20030069983" "20030140041" "20030140272" "20040044721" "20040153700" "20040210895" "20040268175" "20050050304" "20050071824" "20050213498" "20050251785" "20050262097" "20050262411" "20050268273" "20050278688" "20060015764" "20060075381" "20060080411" "20060085679" "20060090097" "20060143512" "20060206873" "20060262716" "20060262734" "20070007336" "20070107052" "20070156659" "20070192518" "20070260733" "20070277056" "20070294578" "20080104441" "20080295114" "20080301760" "20090271787" "20100023996" "20120054486" "5774660" "5951650" "5996016" "6021408" "6026499" "6085086" "6105148" "6144999" "6154877" "6161219" "6189111" "6269442" "6314567" "6321275" "6484276" "6496847" "6496979" "6560626" "6574618" "6601081" "6718538" "6766314" "6823474" "7028305" "7058696" "7076555" "7089294" "7093086" "7096388" "7127713" "7197700" "7207039" "7213246" "7246256" "7257811" "7269645" "7363365" "7370071" "7447896" "7467370" "7512815" "7519963" "7523344" "7543182" "7613921" "7673308" "7694123" "7725763" "7761573" "8065714" "8171483").PN.	EPO; JPO; DERWENT; IBM_TDB			
S921	2	"12334654"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S920	6	havemose.in. and (uninstall\$3.clm.)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S919	6	"12421694"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S918	1	"8341631".pn.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S917	1	"20120054486"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S916	2	"20100023996"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S915	32	(application software process	US-PGPUB;	OR	ON	2019/07/24

		program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:51
S914	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S913	1	"20070007336"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S912	1	"6496847".pn.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S911	162	S910 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S910	221	S909 and S904	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S909	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S908	284	S907 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S907	377	S906 and S904	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S906	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S905	1478	S903 and S904	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S904	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS;	OR	ON	2019/07/24 17:51

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			EPO; JPO; DERWENT; IBM_TDB			
S903	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S902	34	S901 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S901	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S900	2	"20100262970"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S899	12	("6574618" "7127713" "7207039" "7213246" "7370071" "7447896" "7467370" "7512815" "7613921" "7761573" "8065714" "8171483").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S898	1	"20070007336"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S897	1	"6496847".pn.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S896	162	S895 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S895	221	S894 and S889	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51

S894	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S893	284	S892 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S892	377	S891 and S889	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S891	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S890	1478	S888 and S889	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S889	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S888	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:51
S887	34	S886 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S886	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51

		"6314567" "7257811" "7694128" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
S885	2	"20100262970"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:51
S1020	23	S1017 and S1018	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:52
S1019	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:52
S1018	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:52
S1017	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:52
S1016	280	("20020007468" "20020087916" "20020124089" "20020169884" "20020174265" "20030018927" "20030028635" "20030069993" "20030140041" "20030140272" "20040044721" "20040153700" "20040210895" "20040268175" "20050050304" "20050071824" "20050213498" "20050251785" "20050262097" "20050262411" "20050268273" "20050278688" "20060015764" "20060075381" "20060080411" "20060085679" "20060090097" "20060143512" "20060206873" "20060262716" "20060262734" "20070007336" "20070107052" "20070156659" "20070192518" "20070260733" "20070277056" "20070294578" "20080104441" "20080295114" "20080301760" "20090271787" "20100023996" "20120054486" "5774660" "5951650" "5996016" "6021408" "6026499" "6085086"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52

		"6105148" "6144999" "6154877" "6161219" "6189111" "6269442" "6314567" "6321275" "6484276" "6496847" "6496979" "6560626" "6574618" "6601081" "6718538" "6766314" "6823474" "7028305" "7058696" "7076555" "7089294" "7093086" "7096388" "7127713" "7197700" "7207039" "7213246" "7246256" "7257811" "7269645" "7363365" "7370071" "7447896" "7467370" "7512815" "7519963" "7523344" "7543182" "7613921" "7673308" "7694123" "7725763" "7761573" "8065714" "8171483").PN.				
S1015	2	"12334654"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S1014	6	havemose.in. and (uninstall\$3.clm.)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S1013	6	"12421694"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S1012	1	"8341631".pn.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S1011	1	"20120054486"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S1010	2	"20100023996"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S1009	32	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S1008	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S1007	1	"20070007336"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S1006	1	"6496847".pn.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S1005	162	S1004 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2019/07/24 17:52

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			DERWENT; IBM_TDB			
S1004	221	S1003 and S998	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S1003	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S1002	284	S1001 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S1001	377	S1000 and S998	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S1000	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S999	1478	S997 and S998	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S998	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S997	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S996	34	S995 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S995	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52

		"20070294578" "6560626" #: 6794 "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
S994	2	"20100262970"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S993	12	("6574618" "7127713" "7207039" "7213246" "7370071" "7447896" "7467370" "7512815" "7613921" "7761573" "8065714" "8171483").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S992	1	"20070007336"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S991	1	"6496847".pn.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S990	162	S989 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S989	221	S988 and S983	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S988	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S987	284	S986 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S986	377	S985 and S983	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S985	2338	(application software process	US-PGPUB;	OR	ON	2019/07/24

		program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:52
S984	1478	S982 and S983	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S983	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S982	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S981	34	S980 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S980	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S979	2	"20100262970"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S978	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:52
S977	1	"8943500".pn.	US-PGPUB;	OR	OFF	2019/07/24

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			USPAT			17:52
S976	86	S975 and S969	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:52
S975	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:52
S974	162	S973 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S973	221	S972 and S971	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S972	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S971	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S970	23	S968 and S969	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:52
S969	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:52
S968	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:52
S967	23	S964 and S965	US-PGPUB;	OR	OFF	2019/07/24

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:52
S966	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:52
S965	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:52
S964	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:52
S963	32	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S962	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S961	162	S960 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S960	221	S959 and S954	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S959	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S958	284	S957 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT;	OR	ON	2019/07/24 17:52

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			IBM_TDB			
S957	377	S956 and S954	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S956	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S955	1478	S953 and S954	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S954	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S953	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S952	34	S951 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S951	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S950	162	S949 and ((@ad<"20090410") or (@prad<"20090410") or	US-PGPUB; USPAT;	OR	ON	2019/07/24 17:52

		(@rlad<"20090410"))	#: 6799	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S949	221	S948 and S943		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S948	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S947	284	S946 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S946	377	S945 and S943		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S945	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S944	1478	S942 and S943		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S943	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S942	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S941	34	S940 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)		US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52
S940	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847"		US-PGPUB; USPAT	OR	OFF	2019/07/24 17:52

		"20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
S939	101	(remov\$3 delet\$3) with (virtual near machine (vm)) with (application program software) with un\$1install\$3	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:52
S1077	100353	(sandbox isolat\$3) with (remov\$3 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:53
S1076	15	S1075 and S1074	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1075	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1074	64	orphan\$3 with (virtual near machine (vm))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1073	6	havemose.in. and (uninstall\$3.clm.)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1072	35	("14606175", "13708477", "12421691")	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:53
S1071	2	"14749422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	OFF	2019/07/24 17:53

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			DERWENT; IBM_TDB			
S1070	86	S1069 and S1063	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1069	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1068	162	S1067 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1067	221	S1066 and S1065	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1066	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1065	237975	"714"/\$.cls. "719"/\$.cls. "718"/\$.cls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1064	23	S1062 and S1063	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1063	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:53
S1062	115555	"726"/\$.cls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53

S1061	23	S1058 and S1059	#: 6802	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1060	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1059	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)		USPAT	OR	ON	2019/07/24 17:53
S1058	115555	"726"/\$.ccls.		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1057	32	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1056	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1055	162	S1054 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1054	221	S1053 and S1048		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1053	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1052	284	S1051 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))		US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2019/07/24 17:53

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			DERWENT; IBM_TDB			
S1051	377	S1050 and S1048	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1050	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1049	1478	S1047 and S1048	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1048	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1047	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1046	34	S1045 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:53
S1045	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:53
S1044	162	S1043 and ((@ad< "20090410") or	US-PGPUB;	OR	ON	2019/07/24

		(@prad<"20090410") or (@rlad<"20090410"))	USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:53
S1043	221	S1042 and S1037	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1042	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1041	284	S1040 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1040	377	S1039 and S1037	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1039	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1038	1478	S1036 and S1037	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1037	237975	"714"/\$.cls. "719"/\$.cls. "718"/\$.cls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1036	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1035	34	S1034 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:53
S1034	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:53

		"7363365" "6496847" # 6805 "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
S1033	101	(remov\$3 delet\$3) with (virtual near machine (vm)) with (application program software) with un\$1install\$3	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1032	4	orphan\$3 with (virtual near machine (vm)) with (application program software)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1031	86	S1030 and S1024	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1030	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1029	162	S1028 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1028	221	S1027 and S1026	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1027	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3	US-PGPUB; USPAT; FPRS;	OR	ON	2019/07/24 17:53

		(shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	EPO; JPO; DERWENT; IBM_TDB			
S1026	237975	"714"/\$.cls. "719"/\$.cls. "718"/\$.cls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1025	23	S1023 and S1024	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1024	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:53
S1023	115555	"726"/\$.cls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:53
S1022	36	"8341631"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1021	6	"12421694"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:53
S1158	162	S1157 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1157	221	S1156 and S1155	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1156	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1155	237975	"714"/\$.cls. "719"/\$.cls.	US-PGPUB;	OR	ON	2019/07/24

		"718"/\$.ccls.	#: 6807	USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:54
S1154	23	S1152 and S1153		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54
S1153	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)		USPAT	OR	ON	2019/07/24 17:54
S1152	115555	"726"/\$.ccls.		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54
S1151	23	S1148 and S1149		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54
S1150	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54
S1149	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)		USPAT	OR	ON	2019/07/24 17:54
S1148	115555	"726"/\$.ccls.		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54
S1147	32	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1146	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3		US-PGPUB; USPAT; FPRS;	OR	ON	2019/07/24 17:54

		(shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	EPO; JPO; DERWENT; IBM_TDB			
S1145	162	S1144 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1144	221	S1143 and S1138	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1143	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1142	284	S1141 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1141	377	S1140 and S1138	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1140	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1139	1478	S1137 and S1138	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1138	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1137	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1136	34	S1135 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:54
S1135	54	("7028305" "20020124089"	US-PGPUB;	OR	OFF	2019/07/24

		"5996016" "20020087916" # 6809 "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	USPAT			17:54
S1134	162	S1133 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1133	221	S1132 and S1127	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1132	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1131	284	S1130 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1130	377	S1129 and S1127	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1129	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1128	1478	S1126 and S1127	US-PGPUB;	OR	ON	2019/07/24

			USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:54
S1127	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1126	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1125	34	S1124 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:54
S1124	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:54
S1123	101	(remov\$3 delet\$3) with (virtual near machine (vm)) with (application program software) with un\$1install\$3	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1122	4	orphan\$3 with (virtual near machine (vm)) with (application program software)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1121	86	S1120 and S1114	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	OFF	2019/07/24 17:54

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			DERWENT; IBM_TDB			
S1120	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54
S1119	162	S1118 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1118	221	S1117 and S1116	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1117	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1116	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1115	23	S1113 and S1114	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54
S1114	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:54
S1113	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54
S1112	23	S1109 and S1110	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54

S1111	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54
S1110	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:54
S1109	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54
S1108	280	("20020007468" "20020087916" "20020124089" "20020169884" "20020174265" "20030018927" "20030028635" "20030069993" "20030140041" "20030140272" "20040044721" "20040153700" "20040210895" "20040268175" "20050050304" "20050071824" "20050213498" "20050251785" "20050262097" "20050262411" "20050268273" "20050278688" "20060015764" "20060075381" "20060080411" "20060085679" "20060090097" "20060143512" "20060206873" "20060262716" "20060262734" "20070007336" "20070107052" "20070156659" "20070192518" "20070260733" "20070277056" "20070294578" "20080104441" "20080295114" "20080301760" "20090271787" "20100023996" "20120054486" "5774660" "5951650" "5996016" "6021408" "6026499" "6085086" "6105148" "6144999" "6154877" "6161219" "6189111" "6269442" "6314567" "6321275" "6484276" "6496847" "6496979" "6560626" "6574618" "6601081" "6718538" "6766314" "6823474" "7028305" "7058696" "7076555" "7089294" "7093086" "7096388" "7127713" "7197700" "7207039" "7213246" "7246256" "7257811" "7269645" "7363365" "7370071" "7447896" "7467370" "7512815" "7519963" "7523344" "7543182" "7613921" "7673308" "7694123" "7725763" "7761573" "8065714" "8171483").PN.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1107	2	"12334654"	US-PGPUB; USPAT; FPRS;	OR	ON	2019/07/24 17:54

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			EPO; JPO; DERWENT; IBM_TDB			
S1106	6	havemose.in. and (uninstall\$3.clm.)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1105	32	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1104	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1103	162	S1102 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1102	221	S1101 and S1096	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1101	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1100	284	S1099 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1099	377	S1098 and S1096	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1098	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1097	1478	S1095 and S1096	US-PGPUB; USPAT; FPRS;	OR	ON	2019/07/24 17:54

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			EPO; JPO; DERWENT; IBM_TDB			
S1096	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1095	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1094	34	S1093 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:54
S1093	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:54
S1092	162	S1091 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1091	221	S1090 and S1085	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1090	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54

S1089	284	S1088 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1088	377	S1087 and S1085	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1087	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1086	1478	S1084 and S1085	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1085	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1084	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1083	34	S1082 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:54
S1082	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:54

		"20070260733" "20080294 #4" 6816 "6269442").PN.				
S1081	63	S1080 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:54
S1080	127	S1075 and S1079	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:54
S1079	723	(sandbox isolat\$3 mapping) near3 (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2019/07/24 17:54
S1078	2247	(sandbox isolat\$3 mapping) with (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2019/07/24 17:54
S1224	32	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1223	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1222	162	S1221 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1221	221	S1220 and S1215	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1220	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1219	284	S1218 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1218	377	S1217 and S1215	US-PGPUB; USPAT; FPRS;	OR	ON	2019/07/24 17:55

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			EPO; JPO; DERWENT; IBM_TDB			
S1217	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1216	1478	S1214 and S1215	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1215	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1214	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1213	162	S1212 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1212	221	S1211 and S1206	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1211	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1210	284	S1209 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1209	377	S1208 and S1206	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1208	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with	US-PGPUB; USPAT; FPRS;	OR	ON	2019/07/24 17:55

		(shar\$3 near2 (resource interface\$3 file font librar\$3 device storage))	EPO; JPO; DERWENT; IBM_TDB			
S1207	1478	S1205 and S1206	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1206	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1205	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1204	34	S1203 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:55
S1203	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:55
S1202	101	(remov\$3 delet\$3) with (virtual near machine (vm)) with (application program software) with un\$1install\$3	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1201	4	orphan\$3 with (virtual near machine (vm)) with (application program software)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55

S1200	86	S1199 and S1193	#: 6819	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:55
S1199	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:55
S1198	162	S1197 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1197	221	S1196 and S1195		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1196	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1195	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1194	23	S1192 and S1193		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:55
S1193	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)		USPAT	OR	ON	2019/07/24 17:55
S1192	115555	"726"/\$.ccls.		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:55
S1191	23	S1188 and S1189		US-PGPUB; USPAT; USOCR;	OR	OFF	2019/07/24 17:55

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			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S1190	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:55
S1189	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:55
S1188	115555	"726"/\$.cls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:55
S1187	2	"12334654"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1186	6	havemose.in. and (uninstall\$3.clm.)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1185	32	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) same (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1184	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1183	162	S1182 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1182	221	S1181 and S1176	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55

S1181	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1180	284	S1179 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1179	377	S1178 and S1176	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1178	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1177	1478	S1175 and S1176	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1176	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1175	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1174	34	S1173 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:55
S1173	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:55

		"6314567" "7257811" "7694128" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
S1172	162	S1171 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1171	221	S1170 and S1165	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1170	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1169	284	S1168 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1168	377	S1167 and S1165	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1167	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1166	1478	S1164 and S1165	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1165	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:55
S1164	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2019/07/24 17:55

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			DERWENT; IBM_TDB			
S1163	34	S1162 and (isolat\$3 intercept\$3 redirect\$3 mapp\$3)	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:55
S1162	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:55
S1161	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:55
S1160	86	S1159 and S1153	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:55
S1159	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:55
S1249	988485	G06F9/4\$5.cpc. G06F2009/455\$2.cpc. G06F9/50\$2.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:56
S1248	723	(sandbox isolat\$3 mapping) near3 (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2019/07/24 17:56

S1247	25	"12813593" # 6824	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:56
S1246	988485	G06F9/4\$5.cpc. G06F2009/455\$2.cpc. G06F9/50\$2.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:56
S1245	206	(G06F9/4\$2.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.) and (sandbox isolat\$3 mapping) near3 (remov\$3 uninstall\$5) with (application software program)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:56
S1244	824232	G06F9/4\$2.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:56
S1243	63	S1242 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:56
S1242	127	S1237 and S1241	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:56
S1241	723	(sandbox isolat\$3 mapping) near3 (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2019/07/24 17:56
S1240	2247	(sandbox isolat\$3 mapping) with (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2019/07/24 17:56
S1239	100353	(sandbox isolat\$3) with (remov\$3 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:56
S1238	15	S1237 and S1236	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:56
S1237	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:56
S1236	64	orphan\$3 with (virtual near machine (vm))	US-PGPUB; USPAT;	OR	ON	2019/07/24 17:56

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			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S1235	86	S1234 and S1228	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:56
S1234	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:56
S1233	162	S1232 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:56
S1232	221	S1231 and S1230	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:56
S1231	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:56
S1230	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:56
S1229	23	S1227 and S1228	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:56
S1228	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:56
S1227	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	2019/07/24 17:56

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			IBM_TDB			
S1226	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:56
S1225	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:56
S1309	377	S1308 and S1306	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1308	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1307	1478	S1305 and S1306	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1306	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1305	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1304	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:57

		"6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
S1303	221	S1302 and S1297	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1302	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1301	284	S1300 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1300	377	S1299 and S1297	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1299	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1298	1478	S1296 and S1297	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1297	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1296	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1295	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:57

		"6321275" "6718538" "7269648" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
S1294	4	orphan\$3 with (virtual near machine (vm)) with (application program software)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1293	86	S1292 and S1287	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:57
S1292	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:57
S1291	221	S1290 and S1289	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1290	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1289	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1288	23	S1286 and S1287	US-PGPUB; USPAT;	OR	OFF	2019/07/24 17:57

			#: 6829	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S1287	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)		USPAT	OR	ON	2019/07/24 17:57
S1286	115555	"726"/\$.ccls.		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:57
S1285	23	S1282 and S1283		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:57
S1284	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:57
S1283	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)		USPAT	OR	ON	2019/07/24 17:57
S1282	115555	"726"/\$.ccls.		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:57
S1281	280	("20020007468" "20020087916" "20020124089" "20020169884" "20020174265" "20030018927" "20030028635" "20030069993" "20030140041" "20030140272" "20040044721" "20040153700" "20040210895" "20040268175" "20050050304" "20050071824" "20050213498" "20050251785" "20050262097" "20050262411" "20050268273" "20050278688" "20060015764" "20060075381" "20060080411" "20060085679" "20060090097" "20060143512" "20060206873" "20060262716" "20060262734" "20070007336" "20070107052" "20070156659"		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57

		"20070192518" "20070260733" "20070277056" "20070294578" "20080104441" "20080295114" "20080301760" "20090271787" "20100023996" "20120054486" "5774660" "5951650" "5996016" "6021408" "6026499" "6085086" "6105148" "6144999" "6154877" "6161219" "6189111" "6269442" "6314567" "6321275" "6484276" "6496847" "6496979" "6560626" "6574618" "6601081" "6718538" "6766314" "6823474" "7028305" "7058696" "7076555" "7089294" "7093086" "7096388" "7127713" "7197700" "7207039" "7213246" "7246256" "7257811" "7269645" "7363365" "7370071" "7447896" "7467370" "7512815" "7519963" "7523344" "7543182" "7613921" "7673308" "7694123" "7725763" "7761573" "8065714" "8171483").PN.				
S1280	2	"12334654"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1279	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1278	221	S1277 and S1272	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1277	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1276	284	S1275 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1275	377	S1274 and S1272	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1274	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with	US-PGPUB; USPAT; FPRS;	OR	ON	2019/07/24 17:57

		(shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	EPO; JPO; DERWENT; IBM_TDB			
S1273	1478	S1271 and S1272	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1272	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1271	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1270	221	S1269 and S1264	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1269	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1268	284	S1267 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1267	377	S1266 and S1264	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1266	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1265	1478	S1263 and S1264	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1264	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS;	OR	ON	2019/07/24 17:57

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			EPO; JPO; DERWENT; IBM_TDB			
S1263	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1262	1	"12334660"	US-PGPUB; USPAT; FPRS	OR	ON	2019/07/24 17:57
S1261	6	S1259 and (uninstall\$4).clm.	US-PGPUB; USPAT; FPRS	OR	ON	2019/07/24 17:57
S1260	0	S1259 and (remov\$3 with map\$4).clm.	US-PGPUB; USPAT; FPRS	OR	ON	2019/07/24 17:57
S1259	6	S1257 S1258	US-PGPUB; USPAT; FPRS	OR	OFF	2019/07/24 17:57
S1258	1	"9697038".pn.	US-PGPUB; USPAT; FPRS	OR	OFF	2019/07/24 17:57
S1257	6	"42935364".FMID.	US-PGPUB; USPAT; FPRS	OR	OFF	2019/07/24 17:57
S1256	1	S1255 and (remov\$3 with map\$5).clm.	US-PGPUB; USPAT; FPRS	OR	OFF	2019/07/24 17:57
S1255	6	S1253 S1254	US-PGPUB; USPAT; FPRS	OR	OFF	2019/07/24 17:57
S1254	1	"9697038".pn.	US-PGPUB; USPAT; FPRS	OR	OFF	2019/07/24 17:57
S1253	6	"42935364".FMID.	US-PGPUB; USPAT; FPRS	OR	OFF	2019/07/24 17:57
S1252	1	"8341631".pn.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:57
S1251	64	orphan\$3 with (virtual near machine (vm))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:57
S1250	165	S1249 and S1248	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:57
S1363	377	S1362 and S1360	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2019/07/24 17:58

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			DERWENT; IBM_TDB			
S1362	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1361	1478	S1359 and S1360	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1360	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1359	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1358	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:58
S1357	4	orphan\$3 with (virtual near machine (vm)) with (application program software)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1356	86	S1355 and S1350	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2019/07/24 17:58

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			EPO; JPO; DERWENT; IBM_TDB			
S1355	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1354	221	S1353 and S1352	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1353	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1352	237975	"714"/\$.cls. "719"/\$.cls. "718"/\$.cls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1351	23	S1349 and S1350	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1350	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:58
S1349	115555	"726"/\$.cls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1348	23	S1345 and S1346	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1347	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	2019/07/24 17:58

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			IBM_TDB			
S1346	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:58
S1345	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1344	2	"12334654"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1343	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1342	221	S1341 and S1336	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1341	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1340	284	S1339 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1339	377	S1338 and S1336	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1338	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1337	1478	S1335 and S1336	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2019/07/24 17:58

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			DERWENT; IBM_TDB			
S1336	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1335	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1334	221	S1333 and S1328	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1333	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1332	284	S1331 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1331	377	S1330 and S1328	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1330	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1329	1478	S1327 and S1328	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1328	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1327	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2019/07/24 17:58

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			DERWENT; IBM_TDB			
S1326	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1325	86	S1324 and S1319	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1324	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1323	221	S1322 and S1321	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1322	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1321	237975	"714"/\$.cls. "719"/\$.cls. "718"/\$.cls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1320	23	S1318 and S1319	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1319	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:58
S1318	115555	"726"/\$.cls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58

S1317	23	S1314 and S1315	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1316	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1315	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:58
S1314	115555	"726"/\$.ocls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:58
S1313	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1312	221	S1311 and S1306	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1311	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1310	284	S1309 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:58
S1412	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1411	221	S1410 and S1405	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2019/07/24 17:59

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			DERWENT; IBM_TDB			
S1410	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1409	284	S1408 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1408	377	S1407 and S1405	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1407	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1406	1478	S1404 and S1405	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1405	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1404	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1403	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927"	US-PGPUB; USPAT	OR	OFF	2019/07/24 17:59

		"6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
S1402	221	S1401 and S1396	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1401	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1400	284	S1399 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1399	377	S1398 and S1396	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1398	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1397	1478	S1395 and S1396	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1396	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1395	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1394	127	S1390 and S1393	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2019/07/24 17:59

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			EPO; JPO; DERWENT; IBM_TDB			
S1393	723	(sandbox isolat\$3 mapping) near3 (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2019/07/24 17:59
S1392	2247	(sandbox isolat\$3 mapping) with (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2019/07/24 17:59
S1391	100353	(sandbox isolat\$3) with (remov\$3 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:59
S1390	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:59
S1389	64	orphan\$3 with (virtual near machine (vm))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1388	2	"14749422"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:59
S1387	86	S1386 and S1381	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:59
S1386	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:59
S1385	221	S1384 and S1383	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1384	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1383	237975	"714"/\$.cls. "719"/\$.cls. "718"/\$.cls.	US-PGPUB; USPAT; FPRS;	OR	ON	2019/07/24 17:59

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			EPO; JPO; DERWENT; IBM_TDB			
S1382	23	S1380 and S1381	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:59
S1381	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:59
S1380	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:59
S1379	23	S1376 and S1377	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:59
S1378	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:59
S1377	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 17:59
S1376	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 17:59
S1375	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1374	221	S1373 and S1368	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT;	OR	ON	2019/07/24 17:59

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			IBM_TDB			
S1373	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1372	284	S1371 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1371	377	S1370 and S1368	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1370	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1369	1478	S1367 and S1368	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1368	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1367	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1366	221	S1365 and S1360	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1365	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 17:59
S1364	284	S1363 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT;	OR	ON	2019/07/24 17:59

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			IBM_TDB			
S1461	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1460	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1459	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1458	86	S1457 and S1452	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1457	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1456	221	S1455 and S1454	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1455	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1454	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1453	23	S1451 and S1452	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1452	215	(application software process	USPAT	OR	ON	2019/07/24

		program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)				18:00
S1451	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1450	23	S1447 and S1448	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1449	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1448	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 18:00
S1447	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1446	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1445	221	S1444 and S1439	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1444	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1443	284	S1442 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2019/07/24 18:00

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			DERWENT; IBM_TDB			
S1442	377	S1441 and S1439	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1441	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1440	1478	S1438 and S1439	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1439	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1438	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1437	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 18:00
S1436	221	S1435 and S1430	US-PGPUB; USPAT; FPRS; EPO; JPO;	OR	ON	2019/07/24 18:00

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			DERWENT; IBM_TDB			
S1435	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1434	284	S1433 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1433	377	S1432 and S1430	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1432	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1431	1478	S1429 and S1430	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1430	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1429	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1428	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927"	US-PGPUB; USPAT	OR	OFF	2019/07/24 18:00

		"6314567" "7257811" "7694128" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.				
S1427	4	orphan\$3 with (virtual near machine (vm)) with (application program software)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1426	86	S1425 and S1420	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1425	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1424	221	S1423 and S1422	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1423	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1422	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1421	23	S1419 and S1420	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1420	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 18:00
S1419	115555	"726"/\$.ccls.	US-PGPUB;	OR	OFF	2019/07/24

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			18:00
S1418	23	S1415 and S1416	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1417	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1416	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 18:00
S1415	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:00
S1414	280	("20020007468" "20020087916" "20020124089" "20020169884" "20020174265" "20030018927" "20030028635" "20030069993" "20030140041" "20030140272" "20040044721" "20040153700" "20040210895" "20040268175" "20050050304" "20050071824" "20050213498" "20050251785" "20050262097" "20050262411" "20050268273" "20050278688" "20060015764" "20060075381" "20060080411" "20060085679" "20060090097" "20060143512" "20060206873" "20060262716" "20060262734" "20070007336" "20070107052" "20070156659" "20070192518" "20070260733" "20070277056" "20070294578" "20080104441" "20080295114" "20080301760" "20090271787" "20100023996" "20120054486" "5774660" "5951650" "5996016" "6021408" "6026499" "6085086" "6105148" "6144999" "6154877" "6161219" "6189111" "6269442" "6314567" "6321275" "6484276" "6496847" "6496979" "6560626" "6574618" "6601081" "6718538"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00

		"6766314" "6823474" "7028308" "7058696" "7076555" "7089294" "7093086" "7096388" "7127713" "7197700" "7207039" "7213246" "7246256" "7257811" "7269645" "7363365" "7370071" "7447896" "7467370" "7512815" "7519963" "7523344" "7543182" "7613921" "7673308" "7694123" "7725763" "7761573" "8065714" "8171483").PN.				
S1413	2	"12334654"	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:00
S1509	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:01
S1508	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 18:01
S1507	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1506	221	S1505 and S1500	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1505	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1504	284	S1503 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1503	377	S1502 and S1500	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1502	2338	(application software process	US-PGPUB;	OR	ON	2019/07/24

		program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			18:01
S1501	1478	S1499 and S1500	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1500	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1499	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1498	221	S1497 and S1492	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1497	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1496	284	S1495 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1495	377	S1494 and S1492	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1494	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1493	1478	S1491 and S1492	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1492	237975	"714"/\$.ccls. "719"/\$.ccls.	US-PGPUB;	OR	ON	2019/07/24

		"718"/\$.ccls.	#: 6852	USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			18:01
S1491	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1490	4	orphan\$3 with (virtual near machine (vm)) with (application program software)		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1489	86	S1488 and S1483		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:01
S1488	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:01
S1487	221	S1486 and S1485		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1486	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1485	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.		US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1484	23	S1482 and S1483		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:01
S1483	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device		USPAT	OR	ON	2019/07/24 18:01

		storage)) and (install\$5 uninstall\$5)	# 6853				
S1482	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:01	
S1481	23	S1478 and S1479	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:01	
S1480	415994	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:01	
S1479	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 18:01	
S1478	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:01	
S1477	429	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01	
S1476	221	S1475 and S1470	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01	
S1475	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01	
S1474	284	S1473 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01	
S1473	377	S1472 and S1470	US-PGPUB;	OR	ON	2019/07/24	

			USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			18:01
S1472	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1471	1478	S1469 and S1470	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1470	237975	"714"/\$.cls. "719"/\$.cls. "718"/\$.cls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1469	14631	(application software process program) with (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3)	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1468	54	("7028305" "20020124089" "5996016" "20020087916" "20050213498" "20050262097" "20060262716" "6189111" "6321275" "6718538" "7269645" "7363365" "6496847" "20020169884" "20030140272" "20060015764" "20070156659" "20070294578" "6560626" "7076555" "6601081" "20030140041" "20070192518" "20080104441" "20030069993" "20020174265" "20060262734" "20080301760" "7089294" "7543182" "20070007366" "6085086" "7093086" "7673308" "5951650" "20030018927" "6314567" "7257811" "7694123" "20040044721" "20050071824" "20050268273" "20060085679" "20060090097" "6026499" "6144999" "6496847" "6766314" "7058696" "7523344" "20040153700" "20060206873" "20070260733" "20080294114" "6269442").PN.	US-PGPUB; USPAT	OR	OFF	2019/07/24 18:01
S1467	221	S1466 and S1461	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1466	990	(application software process	US-PGPUB;	OR	ON	2019/07/24

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		program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB			18:01
S1465	284	S1464 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1464	377	S1463 and S1461	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1463	2338	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1462	1478	S1460 and S1461	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:01
S1524	824232	G06F9/4\$2.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:02
S1523	127	S1519 and S1522	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:02
S1522	723	(sandbox isolat\$3 mapping) near3 (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2019/07/24 18:02
S1521	2247	(sandbox isolat\$3 mapping) with (remov\$3 uninstall\$5) with (application software program)	USPAT	OR	ON	2019/07/24 18:02
S1520	100353	(sandbox isolat\$3) with (remov\$3 uninstall\$5)	USPAT	OR	ON	2019/07/24 18:02
S1519	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:02
S1518	64	orphan\$3 with (virtual near machine (vm))	US-PGPUB; USPAT;	OR	ON	2019/07/24 18:02

6856

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S1517	86	S1516 and S1511	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:02
S1516	740523	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:02
S1515	221	S1514 and S1513	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:02
S1514	990	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:02
S1513	237975	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/07/24 18:02
S1512	23	S1510 and S1511	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:02
S1511	215	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/07/24 18:02
S1510	115555	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/07/24 18:02
S1526	6	"42935364".FMID.	US-PGPUB; USPAT; FPRS	OR	OFF	2019/07/24 18:03
S1525	1	"10210017".pn.	US-PGPUB;	OR	OFF	2019/07/24

		#: 6857	USPAT			18:03
S1527	1	"7380087".pn.	USPAT	OR	OFF	2019/07/24 20:33

7/ 24/ 2019 10:10:41 PM
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Allan Havemose : Confirmation No.: 8296

Application No. 16/278,659 : Group Art Unit: 2199

Filed: 18 February 2019 : Examiner: Qing Yuan Wu

Title: SYSTEM AND METHOD FOR APPLICATION ISOLATION

AMENDMENT

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In response to the non-final Office Action dated 30 July 2019, Applicant requests reconsideration of this application in light of the following amendments and remarks:

Amendments to the Claims begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

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Reply to non-final Office Action dated 30 July 2019

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A system, comprising:

one or more central processing units;

one or more isolated environments including one or more applications; and

one or more resource mappings ~~an interception database configured to maintain mapping between resources as requested by the one or more applications and the corresponding resources inside said isolated environments between host operating system resources inside the one or more isolated environments and outside the one or more isolated environments;~~

wherein the one or more central processing units and the one or more isolated environments are configured to interact with each other;

wherein ~~the~~ a resource mapping for an application ~~one or more isolated environments are~~ is created or updated during one or more of installing ~~installation of said application in an isolated environment, the one or more applications running said application in said isolated environment, or accessing a resource corresponding to said resource mapping; and~~

wherein a resource mapping for an application is removed or updated during one or more of uninstalling said application, deleting a resource corresponding to said resource mapping, an application of the one or more applications comprises one or more of removing one or more mappings in said interception database for said application, uninstalling said application, archiving at least one of the one or more isolated environments, and or copying removing an isolated environment to a new location ~~information from storage.~~

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2. (Original) The system according to claim 1, wherein the one or more applications are isolated from other applications and a host operating system while the one or more applications run within the one or more isolated environments.

3. (Original) The system according to claim 1 comprising one or more interception layers configured to intercept access to host operating system resources and host operating system interfaces.

4. (Original) The system according to claim 3, wherein the one or more interception layers intercept calls by the one or more applications to the host operating system and system libraries.

5. (Original) The system according to claim 1, wherein updates to the one or more isolated environments occur as the one or more applications use additional resources.

6. (Currently Amended) The system according to claim 1, wherein said one or more resource mappings are maintained in the an interception database ~~translates parameters and contexts between a host environment and the one or more isolated environments.~~

7. (Original) The system according to claim 1, wherein the one or more isolated environments are stored on a local storage.

8. (Original) The system according to claim 1, wherein the one or more isolated environments are stored on a networked storage and the one or more applications are delivered over a network.

9. (Original) The system according to claim 1, wherein each of the one or more applications is installed into its own isolated environment.

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10. (Original) The system according to claim 1, wherein two or more applications are installed into a shared isolated environment.

11. (Original) The system according to claim 10, wherein the two or more applications share resources inside the shared isolated environment.

12. (Original) The system according to claim 1, wherein two or more applications are installed into separate isolated environments and the one or more applications run concurrently in the separate isolated environments.

13. (Original) The system according to claim 1, wherein a first application of the one or more applications is installed twice into separate isolated environments, and the separate isolated environments run concurrently and independently.

14. (Currently Amended) A method, comprising:
creating one or more isolated environments during installation of one or more applications;

maintaining a mapping between a resource as requested by the one or more applications and the corresponding resource inside said isolated environments~~system resources inside the one or more isolated environments and outside the one or more isolated environments~~, wherein said mapping is created or updated during one or more of installing an application in an isolated environment, running said application in said isolated environment, or accessing a resource corresponding to said resource mapping; and

uninstalling an application of the one or more applications, wherein said uninstalling comprises one or more of removing at least one of said mappings, uninstalling said application, and removing isolated environment information from storage.

15. (Original) The method of claim 14 comprising intercepting access to system resources and interfaces at one or more interception layers.

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16. (Currently Amended) The method of claim ~~of claim~~ 14 comprising updating the one or more isolated environments as the one or more applications use additional resources.

17. (Original) The method of claim 14 comprising isolating the one or more applications from other applications and a host operating system while running within the one or more isolated environments.

18. (Currently Amended) A non-transitory computer readable storage medium comprising instructions for:

creating one or more isolated environments during installation of one or more applications;

maintaining a mapping between a resource as requested by the one or more applications and the corresponding resource inside said isolated environments~~system resources inside the one or more isolated environments and outside the one or more isolated environments~~, wherein said mapping is created or updated during one or more of installing an application in an isolated environment, running said application in said isolated environment, or accessing a resource corresponding to said resource mapping; and

uninstalling an application of the one or more applications, wherein said uninstalling comprises one or more of removing at least one of said mappings, uninstalling said application, and removing isolated environment information from storage.

19. (Original) The non-transitory computer readable storage medium of claim 18 comprising instructions for updating the one or more isolated environments as the one or more applications use additional resources.

20. (Original) The non-transitory computer readable storage medium of claim 18 comprising instructions for isolating the one or more applications from other applications and a host operating system while running within the one or more isolated environments.

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REMARKS

Claims 1- 20 are pending. Claims 1, 14 and 18 are independent.

Claims 1, 6, 14, 16, and 18 are amended. Support for the amendment is provided in at least paragraphs [0045]-[0048], [0049]-[0052], [0053]-[0064], [0065]-[0069], [0077]-[0081], and [0082]-[0095] of the specification as filed.

To better present and support arguments, Applicant may include cited text in *italics* and emphasizes key points in **bold**. This is entirely for illustrative purposes.

Claim Objections

Claim 16 is objected to because of the following informalities: “The method **of claim** of claim 14” should read “The method of claim 14”. Appropriate correction has been made.

Double Patenting

Applicant respectfully disagrees that independent claims 1, 14, and 18 as well as the dependent claims are anticipated by the cited art. However, to address the rejections, Applicant has substantially amended independent claims 1, 14, and 18 and any affected dependent claims. More specifically, Applicant chose to amend the claims to more directly claim the resource mapping aspects of the present application while preserving the core

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structure of the claims. The amendments are supported by the entire specification, with key support in at least as following:

- Installing and Running applications: [0045]-[0048]
- Uninstalling Applications: [0049]-[0050]
- Interception Database and Resource Mapping: [0051]- [0064]
- Interception data and control flow: [0065]-[0069]
- Installation-free deployment: [0077]-[0081]
- Administration: [0082]-[0095]

In view of the amended claims, Applicant submits that amended Claims 1-20 are in condition for allowance and respectfully request they be passed to allowance.

Claim 5 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 5 of prior U.S. Patent No. 10,210,017 (Note: dependent claim(s) include every limitation of the claim from which it depends and that it specify a further limitation(s) of the subject matter claimed). Claims 16 and 19 are rejected for the same reason as claim 5 above with respect to claims 16 and 19 of patent '017. This is a statutory double patenting rejection.

In view of the amended claims, Applicant respectfully disagrees that Claims 5, 16, and 19 are anticipated by '017. As such, Applicant submits that amended Claims 5, 16, and 19 are in condition for allowance and respectfully request they be passed to allowance.

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Claim 1 is rejected on the ground of nonstatutory double patenting as being anticipated by claim 5 (i.e. claims 1 and 5) of US Patent US Patent 10,210,017 (hereafter '017) such that claim 5 of patent '017 include all the limitations of claim 1.

In view of the amended claims, Applicant respectfully disagrees that Claim 1 is anticipated by '017. As such, Applicant submits that amended Claim 1, as well as all claims depending from it, are in condition for allowance and respectfully request they be passed to allowance.

Claims 2-13 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-13 of patent '017 (i.e. claim 5 of the instant application is in claim 1 of patent '017).

In view of the amended claims, Applicant respectfully disagrees that Claims 2-13 are anticipated by '017. As such, Applicant submits that amended Claims 2-13, as well as all claims depending from them, are in condition for allowance and respectfully request they be passed to allowance.

Claim 14 is rejected on the ground of nonstatutory double patenting as being anticipated by claim 16 (i.e. claims 14 and 16) of patent '017 such that claim 16 of patent '017 include all the limitations of claim 14.

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In view of the amended claims, Applicant respectfully disagrees that Claim 14 is anticipated by '017. As such, Applicant submits that amended Claim 14, as well as all claims depending from it, are in condition for allowance and respectfully request they be passed to allowance.

Claims 15 and 17 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 14-17 of patent '017 for the same reason as claims 2-13 above.

In view of the amended claims, Applicant respectfully disagrees that Claims 15 and 17 are anticipated by '017. As such, Applicant submits that amended Claims 15 and 17, as well as all claims depending from them, are in condition for allowance and respectfully request they be passed to allowance.

Claim 18 is rejected on the ground of nonstatutory double patenting as being anticipated by claim 19 (i.e. claims 18 and 19) of patent '017 such that claim 18 of patent '017 include all the limitations of claim 18.

In view of the amended claims, Applicant respectfully disagrees that Claim 18 is anticipated by '017. As such, Applicant submits that amended Claim 18, as well as all claims depending from it, are in condition for allowance and respectfully request they be passed to allowance.

Claim 20 is rejected on the ground of nonstatutory double patenting as being unpatentable over claims 18-20 of patent '017 for the same reason as claims 2-13 above.

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In view of the amended claims, Applicant respectfully disagrees that Claim 20 is anticipated by '017. As such, Applicant submits that amended Claim 20, as well as all claims depending from it, are in condition for allowance and respectfully request they be passed to allowance.

Claim 1 is additionally rejected on the ground of nonstatutory double patenting as being unpatentable over claim 5 (1 and 5) of U.S. Patent No. 9,697,038 (hereafter '038).

In view of the amended claims, Applicant respectfully disagrees that Claim 1 is anticipated by '038. As such, Applicant submits that amended Claim 1, as well as all claims depending from it, are in condition for allowance and respectfully request they be passed to allowance.

Claims 2-4 and 6-13 are rejected on the ground of nonstatutory double patenting respectively by claims 1-13 of patent '038 such that claims 1-13 of patent '038 teach all the limitations of claims 2-4 and 6-13 of the instant application aside from being located in a different claim hierarchy.

In view of the amended claims, Applicant respectfully disagrees that Claims 2-4 and 6-13 are anticipated by '038. As such, Applicant submits that amended Claims 2-4 and 6-13, as well as all claims depending from them, are in condition for allowance and respectfully request they be passed to allowance.

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Claims 14-20 are rejected by claims 14-20 of patent '038 for similar reason as applied to claims 1-4 and 6-13 above.

In view of the amended claims, Applicant respectfully disagrees that Claims 14-20 are anticipated by '038. As such, Applicant submits that amended Claims 14-20, as well as all claims depending from them, are in condition for allowance and respectfully request they be passed to allowance.

Claim 1 is additionally rejected on the ground of nonstatutory double patenting as being unpatentable over claim 5 (1 and 5) of U.S. Patent No. 9,336,045 (hereafter '045).

In view of the amended claims, Applicant respectfully disagrees that Claim 1 is anticipated by '045. As such, Applicant submits that amended Claim 1, as well as all claims depending from it, are in condition for allowance and respectfully request they be passed to allowance.

Claims 2-13 are rejected on the ground of nonstatutory double patenting respectively by claims 2-13 of patent '045 such that claims 2-13 of patent '045 teach all the limitations of claims 2-13 of the instant application aside from being located in a different claim hierarchy.

In view of the amended claims, Applicant respectfully disagrees that Claims 2-13 are anticipated by '045. As such, Applicant submits that amended Claims 2-13, as well as all claims depending from them, are in condition for allowance and respectfully request they be passed to allowance.

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Claims 14-20 are rejected by claims 14-20 of patent '045 for similar reason as applied to claims 1-13 above.

In view of the amended claims, Applicant respectfully disagrees that Claims 14-20 are anticipated by '045. As such, Applicant submits that amended Claims 14-20, as well as all claims depending from them, are in condition for allowance and respectfully request they be passed to allowance.

Claim 1 is additionally rejected on the ground of nonstatutory double patenting as being unpatentable over claim 5 (1 and 5) of U.S. Patent No. 8,943,500 (hereafter '500).

In view of the amended claims, Applicant respectfully disagrees that Claim 1 is anticipated by '500. As such, Applicant submits that amended Claim 1, as well as all claims depending from it, are in condition for allowance and respectfully request they be passed to allowance.

Claims 2-13 are rejected on the ground of nonstatutory double patenting respectively by claims 2-13 of patent '500 such that claims 2-13 of patent '500 teach all the limitations of claims 2-13 of the instant application aside from being located in a different claim hierarchy.

In view of the amended claims, Applicant respectfully disagrees that Claims 2-13 are anticipated by '500. As such, Applicant submits that amended Claims 2-13, as well as all claims depending from them, are in condition for allowance and respectfully request they be passed to allowance.

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Claims 14-20 are rejected by claims 14-20 of patent '500 for similar reason as applied to claims 1-13 above.

In view of the amended claims, Applicant respectfully disagrees that Claims 14-20 are anticipated by '500. As such, Applicant submits that amended Claims 14-20, as well as all claims depending from them, are in condition for allowance and respectfully request they be passed to allowance.

Claims 1-13 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 and 3-10 of U.S. Patent No. 8,341,631 (hereafter '631).

In view of the amended claims, Applicant respectfully disagrees that Claims 1-13 are anticipated by '631. As such, Applicant submits that amended Claims 1-13, as well as all claims depending from them, are in condition for allowance and respectfully request they be passed to allowance.

Claims 14-20 are rejected by claims 11-12 of patent '631 for similar reason as applied to claims 1-13 above.

In view of the amended claims, Applicant respectfully disagrees that Claims 14-20 are anticipated by '631. As such, Applicant submits that amended Claims 14-20, as well as all claims depending from them, are in condition for allowance and respectfully request they be passed to allowance.

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In view of the arguments presented and the amended claims, Applicant submits that amended Claims 1-20 are in condition for allowance and respectfully request they be passed to allowance.

Allowable Subject Matter

1. *Claims 1-20 would be allowable by overcoming the double patenting rejections above.*

In view of the arguments presented in the double-patenting section and the amended claims, Applicant submits that amended Claims 1-20 are in condition for allowance and respectfully request they be passed to allowance.

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CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested.

Applicant respectfully believes that the instant remarks and/or amendments are sufficient to overcome the Examiner's rejections, However, Applicant's silence as to assertions or requirements in the Office Action that may be applicable to such assertions (e.g., whether a reference constitutes prior art, reasons to modify a reference or to combine references, assertions as to dependent claims, allegations of Official Notice, etc.) is not a concession by Applicant that such assertions are accurate or such requirements have been met. As such, Applicant reserves the right to dispute such assertions in the future.

	Respectfully submitted,
	RGIP LLC 1103 Twin Creeks Allen, TX 75013 Phone: (972) 849-1310
Dated: 10/30/2019	<u>/Raffi Gostanian/</u>
	Raffi Gostanian Reg. No. 42,595 Docket No. AVAIL0109-C5

Electronic Acknowledgement Receipt

EFS ID:	37613191
Application Number:	16278659
International Application Number:	
Confirmation Number:	8296
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION
First Named Inventor/Applicant Name:	Allan Havemose
Customer Number:	84646
Filer:	Raffi Gostanian/Jaclyn Makarewicz
Filer Authorized By:	Raffi Gostanian
Attorney Docket Number:	AVAIL0109-C5
Receipt Date:	30-OCT-2019
Filing Date:	18-FEB-2019
Time Stamp:	20:39:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		AVAIL0109-C5-Amendment-NFOA-7-30-19.pdf	119922	yes	15
			d2dd73f0005182aa9d1675458876a952aea0dc69		

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	5
	Applicant Arguments/Remarks Made in an Amendment	6	15

Warnings:

Information:

Total Files Size (in bytes):	119922
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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NOTICE OF ALLOWANCE AND FEE(S) DUE

84646 7590 11/20/2019
Proactive Patents LLC
955 Garden Park Drive
Ste 230
Allen, TX 75013

EXAMINER	
WU, QING YUAN	
ART UNIT	PAPER NUMBER
2199	

DATE MAILED: 11/20/2019

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/278,659	02/18/2019	Allan Havemose	AVAIL0109-C5	8296

TITLE OF INVENTION: SYSTEM AND METHOD FOR APPLICATION ISOLATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1000	\$0.00	\$0.00	\$1000	02/20/2020

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL
6876

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

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Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/278,659	02/18/2019	Allan Havemose	AVAIL0109-C5	8296

TITLE OF INVENTION: SYSTEM AND METHOD FOR APPLICATION ISOLATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1000	\$0.00	\$0.00	\$1000	02/20/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
WU, QING YUAN	2199	717-169000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

1 _____

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/278,659	02/18/2019	Allan Havemose	AVAIL0109-C5	8296
84646	7590	11/20/2019	EXAMINER	
Proactive Patents LLC			WU, QING YUAN	
955 Garden Park Drive			ART UNIT	
Ste 230			PAPER NUMBER	
Allen, TX 75013			2199	

DATE MAILED: 11/20/2019

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b) (2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/278,659	Applicant(s) Havemose, Allan	
	Examiner QING YUAN WU	Art Unit 2199	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication filed on 10/30/19.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-20. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some *c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).


6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. <input type="checkbox"/> Notice of References Cited (PTO-892)	5. <input type="checkbox"/> Examiner's Amendment/Comment
2. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance
3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. <input type="checkbox"/> Other _____.
4. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date. _____.	

/QING YUAN WU/
Primary Examiner, Art Unit 2199

6880

<i>Search Notes</i> 	Application/Control No. 16/278,659	Applicant(s)/Patent Under Reexamination Havemose, Allan
	Examiner QING YUAN WU	Art Unit 2199

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner


* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
G06F9/4\$5.cpc. G06F2009/455\$2.cpc. G06F9/50\$2.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc. [Combination of classification and text search in EAST - see search history]	11/15/2019	QW
Update inventor name search	11/15/2019	QW
NPL search in Google, Google Scholar and IP.com	11/15/2019	QW

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
G06F	9/46,455,50; 11/00; 8/61,62	11/15/2019	QW

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6881


Issue Classification 	Application/Control No. 16/278,659	Applicant(s)/Patent Under Reexamination Havemose, Allan
	Examiner QING YUAN WU	Art Unit 2199

CPC						
Symbol					Type	Version
G06F	/	9	/	46	F	2013-01-01
G06F	/	8	/	62	I	2013-01-01
G06F	/	9	/	50	I	2013-01-01
G06F	/	8	/	61	I	2013-01-01
G06F	/	9	/	455	I	2013-01-01
G06F	/	11	/	008	A	2013-01-01

CPC Combination Sets							
Symbol				Type	Set	Ranking	Version
	/		/				

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/QING YUAN WU/ Primary Examiner, Art Unit 2199	15 November 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

6882

<i>Issue Classification</i> 	Application/Control No. 16/278,659	Applicant(s)/Patent Under Reexamination Havemose, Allan
	Examiner QING YUAN WU	Art Unit 2199


INTERNATIONAL CLASSIFICATION			
CLAIMED			
G06F9/46	/	9	/ 46
G06F8/61	/	8	/ 61
G06F9/50	/	9	/ 50
G06F9/455	/	9	/ 455
G06F11/00	/	11	/ 00
NON-CLAIMED			
	/		/

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)		20	
(Date)			
/QING YUAN WU/		15 November 2019	
Primary Examiner, Art Unit 2199		O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)		1	2
(Date)			

6883

Issue Classification 	Application/Control No. 16/278,659	Applicant(s)/Patent Under Reexamination Havemose, Allan
	Examiner QING YUAN WU	Art Unit 2199































☒ Claims renumbered in the same order as presented by applicant
 ☐ CPA
 ☐ T.D.
 ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/QING YUAN WU/ Primary Examiner, Art Unit 2199 (Primary Examiner)	15 November 2019 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 2

Today - Friday, November 15, 2019

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1671	160	(Havemose near Allan).in.	US-PGPUB; USPAT	OR	OFF	2019/11/15 17:09
S1673	69	S1672 and (archiv\$3 cop\$4 relocat\$3)	US-PGPUB; USPAT	OR	ON	2019/11/15 17:10
S1672	73	isolat\$3 and S1671	US-PGPUB; USPAT	OR	OFF	2019/11/15 17:10
S1681	23	S1680 and S1677	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/11/15 17:54
S1680	115533	"726"/\$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/11/15 17:54
S1679	90	S1678 and S1677	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/11/15 17:54
S1678	720082	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/11/15 17:54
S1677	224	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/11/15 17:54
S1676	129	S1674 and S1675	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/11/15 17:54
S1675	737	(sandbox isolat\$3 mapping) near3 (remov\$3 uninstall\$5) with	USPAT	OR	ON	2019/11/15 17:54

		(application software program)				
S1674	720082	G06F9/445.cpc. G06F9/50.cpc. H04L63/00.cpc. G06F21/\$4.cpc. G06F11/\$4.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2019/11/15 17:54
S1685	284	S1684 and ((@ad<"20090410") or (@prad<"20090410") or (@rlad<"20090410"))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/11/15 17:55
S1684	377	S1683 and S1682	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/11/15 17:55
S1683	2427	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 mapp\$3) with (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage))	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/11/15 17:55
S1682	238459	"714"/\$.ccls. "719"/\$.ccls. "718"/\$.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2019/11/15 17:55

EAST Search History (I nterference)

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S1690	108	(remov\$3 delet\$3) with (virtual near machine (vm)(isolat\$3 near2 environment)) with (application program software) with un\$1install\$3	US- PGPUB; USPAT	OR	ON	2019/11/15 18:01
S1689	6354	G06F9/46.cpc. G06F9/445.cpc. G06F9/50.cpc. G06F11/00.cpc.	USPAT	OR	OFF	2019/11/15 18:01
S1688	17	S1687 and S1686	USPAT	OR	ON	2019/11/15 18:01
S1687	5891	G06F9/46.cpc. G06F9/445.cpc. G06F9/50.cpc. G06F11/008.cpc.	USPAT	OR	OFF	2019/11/15 18:01
S1686	224	(application software process program) near3 (hook\$3 isolat\$3 intercept\$3 redirect\$3 map\$4) near3 (shar\$3 near2 (resource interface memor\$3 file font librar\$3 device storage)) and (install\$5 uninstall\$5)	USPAT	OR	ON	2019/11/15 18:01
S1692	108	(remov\$3 delet\$3) with (virtual near machine (vm)(isolat\$3 near2 environment)) with (application program software) with un\$1install\$3	US- PGPUB; USPAT	OR	ON	2019/11/15 18:02
S1693	22059	G06F9/46.cpc. G06F9/445.cpc. G06F9/50.cpc. G06F11/00.cpc.	US- PGPUB;	OR	OFF	2019/11/15 18:06

		G06F8/61,62.cpc.	#: 6887	USPAT			
S1696	9	S1694 and S1695		US-PGPUB; USPAT	OR	OFF	2019/11/15 20:36
S1695	22059	G06F9/46.cpc. G06F9/445.cpc. G06F9/50.cpc. G06F11/00.cpc. G06F8/61,62.cpc.		US-PGPUB; USPAT	OR	OFF	2019/11/15 20:36
S1694	108	(remov\$3 delet\$3) with (virtual near machine (vm)(isolat\$3 near2 environment)) with (application program software) with un\$1install\$3		US-PGPUB; USPAT	OR	ON	2019/11/15 20:36
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L3	20	I1 and L2		US-PGPUB; USPAT	OR	ON	2019/11/15 21:59
L2	108	(remov\$3 delet\$3) with (virtual near machine (vm)(isolat\$3 near2 environment)) with (application program software) with un\$1install\$3		US-PGPUB; USPAT	OR	ON	2019/11/15 21:59
L6	15	I3 not L5		US-PGPUB; USPAT	OR	ON	2019/11/15 22:00
L5	5	L4 and L2		US-PGPUB; USPAT	OR	ON	2019/11/15 22:00
L4	6354	G06F9/46.cpc. G06F9/445.cpc. G06F9/50.cpc. G06F11/00.cpc.		USPAT	OR	OFF	2019/11/15 22:00

11/15/2019 10:01:35 PM

C:\Users\qwu\Documents\EAST\Workspaces\13708477.wsp

FEE ADDRESS INDICATION FORM

Application Number	16278659	Art Unit	2199
Filing Date	18-Feb-2019	Examiner Name	QING YUAN WU
First Name Inventor	Allan Havemose	Attorney Doc. Number	AVAIL0109-C5

INSTRUCTIONS: In order for the fee address identified on this form to be effective, the issue fee must have been paid for the application listed on this form. Only an address represented by a customer number can be established as the fee address for maintenance fee purposes (hereafter, fee address). A fee address should be established when correspondence related to maintenance fees should be mailed to a different address than the correspondence address for the application. For more information on customer numbers, see the Manual of Patent Examining Procedure (MPEP) § 403.

Please recognize as the Fee Address under the provisions of 37 CFR 1.363 the address associated with:

Customer Number:	84646
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Signature :

I certify, in accordance with 37 CFR 1.4(d)(4) that I am an attorney or agent registered to practice before the Patent and Trademark Office who has filed and has been granted power of attorney in this application.

Signature	/Raffi Gostanian/	Date	02-19-2020
Name	Raffi Gostanian	Registration Number	42595

Electronic Patent Application Fee Transmittal				
Application Number:	16278659			
Filing Date:	18-Feb-2019			
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION			
First Named Inventor/Applicant Name:	Allan Havemose			
Filer:	Raffi Gostanian/Candace Guzman			
Attorney Docket Number:	AVAIL0109-C5			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPL ISSUE FEE	1501	1	1000	1000
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1000

Electronic Acknowledgement Receipt

EFS ID:	38635496
Application Number:	16278659
International Application Number:	
Confirmation Number:	8296
Title of Invention:	SYSTEM AND METHOD FOR APPLICATION ISOLATION
First Named Inventor/Applicant Name:	Allan Havemose
Customer Number:	84646
Filer:	Raffi Gostanian/Candace Guzman
Filer Authorized By:	Raffi Gostanian
Attorney Docket Number:	AVAIL0109-C5
Receipt Date:	19-FEB-2020
Filing Date:	18-FEB-2019
Time Stamp:	19:47:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1000
RAM confirmation Number	E20202IJ47196102
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	Web85b.pdf	46012	no	2
			ece53ab1a2046de7d327199108310a789c1face9		

Warnings:**Information:**

2	Maintenance Fee Address Change	web85feeaddress.pdf	32656	no	1
			c6929af065fa469b17b181514d6339f3ef5769e8		

Warnings:**Information:**

3	Fee Worksheet (SB06)	fee-info.pdf	32091	no	2
			024429a8e593e3a7a12dd523d08b7f6414674786		

Warnings:**Information:**

Total Files Size (in bytes):			110759
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Document Description: Issue Fee Payment (PTO-85B)

Issue Fee Transmittal Form

Application Number	Filing Date	First Named Inventor	Atty. Docket No.	Confirmation No.
16278659	18-Feb-2019	Allan Havemose	AVAIL0109-C5	8296

TITLE OF INVENTION :

SYSTEM AND METHOD FOR APPLICATION ISOLATION

Entity Status	Application Type	Art Unit	Class - Subclass	EXAMINER
Regular Undiscounted	Utility under 35 USC 111(a)	2199	169000	QING YUAN WU
Issue Fee Due	Publication Due	Total Fee(s) Due	Date Due	Prev. Paid Fee
\$1000	\$0	\$1000	20-Feb-2020	\$0

1.Change of Correspondence Address and/or Indication Of Fee Address (37 CFR 1.33 & 1.363)

Current Correspondence Address:	Current Indicated Fee Address :
<p>84646 Proactive Patents LLC</p> <p>955 Garden Park Drive Ste 230 Allen TX 75013 UNITED STATES 972-849-1310 eofficeaction@apcoll.com</p>	
<input type="checkbox"/> Change of correspondence address requested, system generated AIA/122-EFS form attached	<input checked="" type="checkbox"/> Fee Address indication requested, system generated SB/47-EFS form attached

2.Entity Status

Change in Entity Status

Applicant certifying micro entity status; system generated Micro Entity certification form attached. See 37 CFR 1.29.

Note: Absent a valid certification of micro entity status, issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
☐ If this box is checked, you will be prompted to choose a micro entity status on the gross income basis (37 CFR 1.29(a)) or the institution of higher education basis (37 CFR 1.29(d)), and make the applicable certification online.

☐ Applicant asserting small entity status. See 37 CFR 1.27.

Note: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

☒ Applicant changing to regular undiscounted fee status.

Note: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

Document Description: Issue Fee Payment (PTO-85B)

3.The Following Fee(s) Are Submitted:

☒ Issue Fee

☐ I authorize USPTO to apply my previously paid issue fee to the current fees due

☐ Publication Fee

☐ The Director is hereby authorized to apply my previously paid issue fee to the current fee due and to charge deficient fees to Deposit Account Number _____

☐ Advance Order - # of copies _____

☐ If in addition to the payment of the issue fee amount submitted with this form, there are any discrepancies in any amount(s) due, the Director is authorized to charge any deficiency, or credit any overpayment, to Deposit Account Number _____.
The **issue fee must be submitted** with this form. **If payment of the issue fee does not accompany this form, checking this box and providing a deposit account number will NOT be effective to satisfy full payment of the fee(s) due.**

4.Firm and/or Attorney Names To Be Printed

NOTE: If no name is listed, no name will be printed

For printing on the patent front page, list to be displayed as entered

1.
2.
3.

5.Assignee Name(s) and Residence Data To Be Printed

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

Name	City	State	Country	Category
OPEN INVENTION NETWORK LLC	Durham	NORTH CAROLINA	united states	corporation

6.Signature

I certify, in accordance with 37 CFR 1.4(d)(4) that I am an attorney or agent registered to practice before the Patent and Trademark Office who has filed and has been granted power of attorney in this application. I also certify that this Fee(s) Transmittal form is being transmitted to the USPTO via EFS-WEB on the date indicated below.

Signature	/Raffi Gostanian/	Date	02-19-2020
Name	Raffi Gostanian	Registration Number	42595



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/278,659	03/31/2020	10606634	AVAIL0109-C5	8296

84646

7590

03/11/2020

Proactive Patents LLC
955 Garden Park Drive
Ste 230
Allen, TX 75013

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

OPEN INVENTION NETWORK LLC, Durham, NC;
Allan Havemose, Arroyo Grande, CA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

IN THE UNITED STATES PATENT AND TRADEMARK
OFFICE

**REVOCATION AND POWER OF
ATTORNEY AND
CHANGE OF CORRESPONDENCE ADDRESS**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In accordance with 37 C.F.R. Section 1.36, M.P.E.P. Section 402.05 and 402.07, please revoke any existing Powers of Attorney for the below listed applications, and appoint the attorneys and/or patent agents associated with the following customer number to prosecute these applications and to transact all business in the Patent and Trademark Office in connection therewith:

Customer Number: 26502

<u>Appl. Serial No.</u>	<u>Filing Date</u>	<u>Attorney Docket Number</u>	<u>Confirmation Number</u>
15/341637	2016-11-02	P202253592US03	2036
15/175666	2016-06-07	P202253616US03	4150
13/906699	2013-05-31	P202253624US02	4665
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16/043480	2018-07-24	P202253667US07	7342
16/253186	2019-01-21	P202253667US09	2377
14/557744	2014-12-02	P202253625US02	9529
15/832403	2017-12-05	P202253684US04	3940
14/471105	2014-08-28	P202253707US02	9169
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16/533777	2019-08-06	P202253707US04	1377
15/935330	2018-03-26	P202253708US02	2758
16/420101	2019-05-22	P202253709US02	1761
16/727865	2019-12-26	P202253711US02	6285
13/708477	2012-12-07	P202253728US02	6261
14/606175	2015-01-27	P202253728US03	9834
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14/542611	2014-11-16	P202253728US09	2137
15/013680	2016-02-02	P202253728US11	7184
13/849940	2013-03-25	P202253728US13	2153
15/799859	2017-10-31	P202253728US15	9424
14/044152	2013-10-02	P202253728US18	5511
15/175797	2016-06-07	P202253728US19	6492
15/823938	2017-11-28	P202253728US20	8345
16/418947	2019-05-21	P202253728US21	6695
14/159884	2014-01-21	P202253728US24	7501
14/458917	2014-08-13	P202253728US25	6869
14/720804	2015-05-24	P202253728US26	1020
15/424795	2017-02-04	P202253728US27	4416
15/653194	2017-07-18	P202253728US28	8505
14/450879	2014-08-04	P202253728US32	7725
14/720807	2015-05-24	P202253728US33	9103
15/437326	2017-02-20	P202253728US34	5478
16/378375	2019-04-08	P202253728US35	4619
13/862979	2013-04-15	P202253728US40	3593
14/606093	2015-01-27	P202253728US41	3568
15/201956	2016-07-05	P202253728US42	1146
16/006103	2018-06-12	P202253728US43	9095
16/709856	2019-12-10	P202253728US44	9533
15/494721	2017-04-24	P202253756US03	5275
16/459659	2019-07-02	P202253756US04	4277
17/139982	2020-12-31	P202253756US05	8147
16/239491	2019-01-03	P202253757US05	1088
16/239513	2019-01-03	P202253757US08	5732
17/009679	2020-09-01	P202253757US09	3316

17/033724	2020-09-26	P202253757US10	5282
17/033819	2020-09-27	P202253757US11	3487
17/033729	2020-09-26	P202253757US12	8499
16/239502	2019-01-03	P202253757US14	5580
14/341987	2014-07-28	P202253779US02	9850
14/698430	2015-04-28	P202253779US03	1461
15/627918	2017-06-20	P202253779US05	4342
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14/812592	2015-07-29	P202253942US05	3481
15/824198	2017-11-28	P202253942US06	9426

Please direct all correspondence in the above cases to:

International Business Machines Corporation
Customer No. 26502

Date: 10/27/2022

By: 
Name: Timothy M Farrell
Title: Counsel
Reg. No. 37,321

UNITED STATES
PATENT AND TRADEMARK OFFICEP.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
16/278,659RECEIPT DATE / TIME
01/26/2023 11:02:33 AM ETATTORNEY DOCKET #
AVAIL0109-C5

Title of Invention

SYSTEM AND METHOD FOR APPLICATION ISOLATION

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	10606634
CONFIRMATION #	8296	FILED BY	Edith Welling
PATENT CENTER #	61496467	FILING DATE	02/18/2019
CUSTOMER #	84646	FIRST NAMED INVENTOR	Allan Havemose
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Timothy Farrell

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
OIN Bulk RevPOA_Granted cases Signed by Tim 102722.pdf	4	Power of Attorney	579 KB
P202253728US06__STATEMENT Signed by Tim 011723.pdf	3	Assignee showing of ownership per 37 CFR 3.73	605 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
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6901

OIN Bulk RevPOA_Granted cases Signed by Tim 102722.pdf	D6A48E6105B505B7779F90E59D9CF1C13D6E2FBBF3BF01B82 BD0EE826B556C94EFDD3D740CD4D45EACC15364DAB27F0F5 AFA905A91CE04757AFA42064656531E
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P202253728US06__STATEMEN T Signed by Tim 011723.pdf	3EB23C7A5B1A2F493E2BDD7BF03E318FE3F16BFA81E62887F D83B2B9687E697BEA41D136C182C8CAB1588C7A49E8D62C19 166DB91585D5917329A9AE67DD4590
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: International Business Machines CorporationApplication No./Patent No.: 10,606,634Filed/Issue Date: 03/31/2020Titled: SYSTEM AND METHOD FOR APPLICATION ISOLATIONInternational Business Machines Corporation, a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: ALLAN HAVEMOSE To: OPEN INVENTION NETWORK LLCThe document was recorded in the United States Patent and Trademark Office at
Reel 022531, Frame 0595, or for which a copy thereof is attached.2. From: OPEN INVENTION NETWORK LLC To: International Business Machines CorporationThe document was recorded in the United States Patent and Trademark Office at
Reel 061365, Frame 0571, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature

Timothy M. Farrell

Printed or Typed Name

01/16/2023

Date

37321

Title or Registration Number

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/278,659	02/18/2019	Allan Havemose	AVAIL0109-C5

CONFIRMATION NO. 8296**POWER OF ATTORNEY NOTICE**

OC000000137310820

84646
OPEN INVENTION NETWORK LLC
900 West Bethany Drive
Suite 380
Allen, TX 75013

Date Mailed: 02/06/2023

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/26/2023.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/nhassani/



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CONFIRMATION NO. 8296**POA ACCEPTANCE LETTER**

26502

INTERNATIONAL BUSINESS MACHINES CORPORATION

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OC000000137310828

Date Mailed: 02/06/2023

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/26/2023.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/nhassani/